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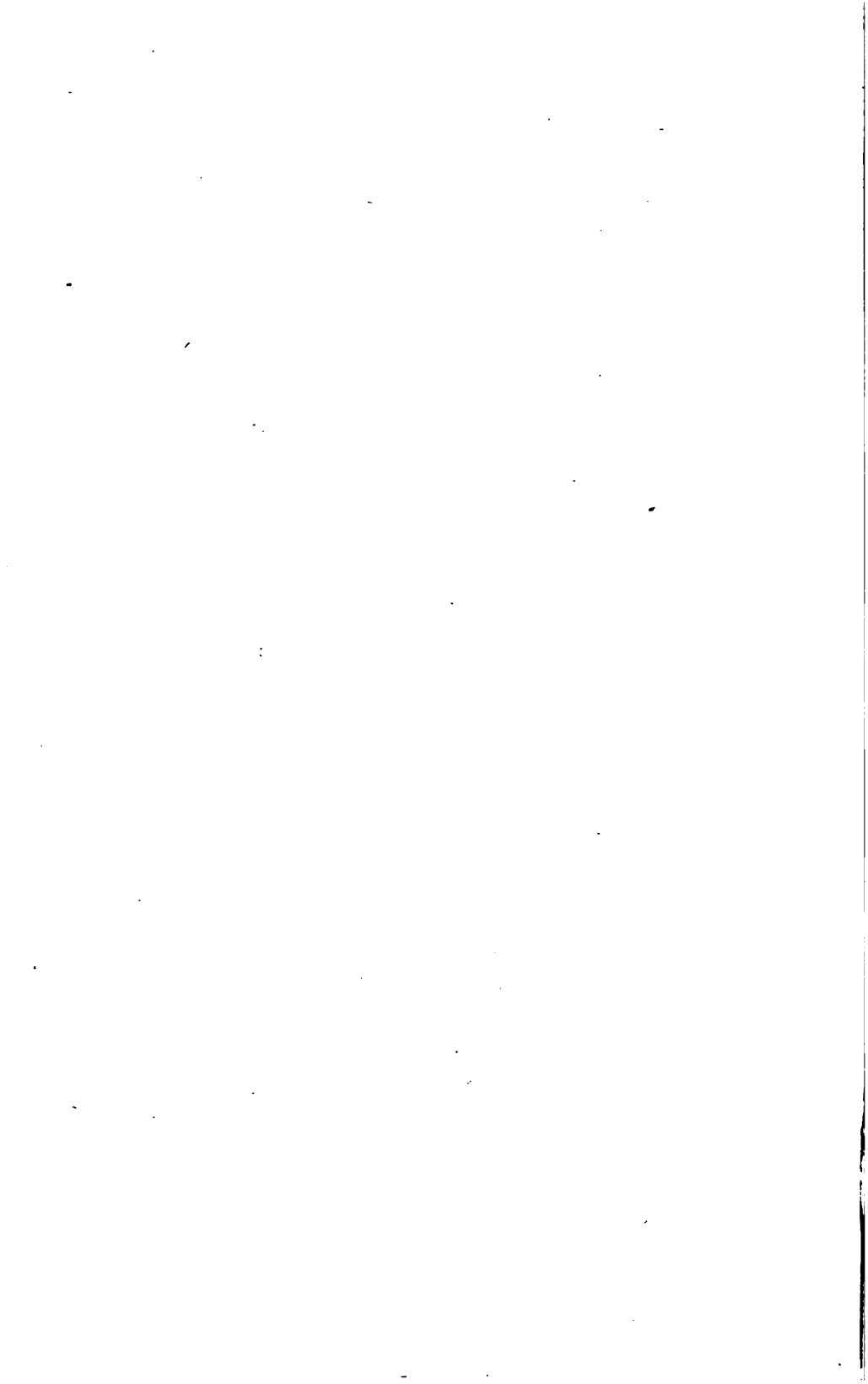
DESCRIPTIVE CATALOGUE

OF THE

ANTIQUITIES

FOUND IN THE EXCAVATIONS AT THE

NEW ROYAL EXCHANGE.



A
DESCRIPTIVE CATALOGUE
OF THE
ANTIQUITIES
FOUND IN THE EXCAVATIONS AT THE
New Royal Exchange,
PRESERVED IN THE MUSEUM OF THE CORPORATION OF
LONDON. .

PRECEDED BY AN INTRODUCTION
CONTAINING AN ACCOUNT OF THEIR DISCOVERY,
WITH SOME PARTICULARS AND SUGGESTIONS
RELATING TO
ROMAN LONDON.

By WILLIAM TITE, Esq., F.R.S., F.S.A.
ARCHITECT OF THE NEW ROYAL EXCHANGE.

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THE MEMBERS OF THE CORPORATION OF
THE CITY OF LONDON.

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OBSERVATIONS
ILLUSTRATIVE OF THE DISCOVERIES
ON THE SITE OF THE NEW ROYAL EXCHANGE,
WITH
SOME INTRODUCTORY REMARKS ON THE PROBABLE HISTORY OF
ROMAN LONDON.

ROMAN LONDON, of which the Antiquities described in the ensuing pages are genuine and interesting remains, is a place of which so little is accurately known, that the subject appears to belong to imagination rather than to history. It affords a remarkable "exemplification of those deceptions which are produced by the ærial perspective of the mind, and of the obscure and imperfect notions formed of the things of antiquity^a." As there is no doubt that the Romans seated themselves in all those countries which they had successfully invaded^b, and carried their own arts and sciences with them wherever they were seated, so, in speculative thought, Londinium often becomes at length invested with some of the magnificence of Rome itself. There is not, however, any authority for such a conclusion, to be derived from the architectural remains at any time discovered in this city. It is well known that Severus and Constantine, and probably Constantius also, reigned and died at York; and that York likewise contained a temple to Bellona, an edifice erected in the principal cities of the empire only: but in London neither

^a *Quarterly Review*, June 1826, vol. xxxiv. p. 249.

^b "Hic deinde populus quot colonias in omnes provincias misit? Ubique vicit Romanus, habitat."—L. A. Seneca, *Cons. ad Helv.*, sect. vii.

great palatial remains, nor the traces of extensive religious structures, nor the ruins of spacious theatres, have been at any time found to exist, and even the line of the earliest walls is almost matter of conjecture. Hence Dr. Woodward considered that the only accurate means of tracing the boundaries of the city, and of identifying those places whereon fanes might once have stood, was by such urns and places of sepulture as were found close to the walls within; and by the sacrificing-vessels, sculptures; and inscriptions which appeared to indicate the sites of temples^c. Such reliques, with some tessellated pavements, are nearly all the real remains that have been discovered of Roman London. The very eminent position in which the city has been acknowledged to stand for many centuries has probably given rise to the impression, so generally prevailing, of its importance whilst the Romans resided in Britain, with the view of carrying back that eminence to as remote a period as possible.

The subject of the present volume appeared naturally to require some introductory remarks and notices of the metropolis during the age to which the discoveries on the site of the New Royal Exchange chiefly belong; and, having offered these observations as to what Roman London was *not*, it is proposed very shortly to consider what it really was. These statements will be concluded by an account of the Discovery of the Antiquities - which are hereafter described. In the remarks and observations on the former subject, I have to acknowledge my obligations to my old and esteemed friend Richard Kelsey, esq., formerly Surveyor to the Commissioners of Sewers, who has placed at my disposal an elaborate and intelligent account of all that he had observed in connexion with excavations for sewers within the city for a period

^c Letter to Sir Christopher Wren, occasioned by some Antiquities lately discovered near Bishopsgate; Leland's *Itin.* (1774), vol. viii. App. p. 32.

of thirty years. This statement is equally creditable to his care, his learning, and his industry, and to him I owe most of the new facts which I have incorporated in this paper.

I. *The Londinium of Tacitus.*

THE very valuable though concise description of Londinium by Tacitus in A.D. 61, shows that it was a pacific and an undefended British town, without walls; and regarded, at least by the Romans, as no more than a secondary station. "Suetonius," says the Annalist, as translated by Murphy, "marched through the heart of the country as far as London; a place not dignified with the name of a colony, but the chief residence of merchants, and the great mart of trade and commerce. At that place he meant to fix the seat of war; but, reflecting on the scanty numbers of his little army, and the fatal rashness of Cerealis, he resolved to quit that station, and, by giving up one post, secure the rest of the province. Neither supplications nor the tears of the inhabitants could induce him to change his design. The signal for the march was given. All who chose to follow his banner were taken under his protection. Of all those who, on account of their advanced age, the weakness of their sex, or the attractions of the situation, remained behind fell beneath the power of the enemy^d."

^d "At Suetonius mirâ constantiâ medios inter hostes Londinium perrexit, cognomento quidem coloniæ non insigne, sed copiâ negotiatorum et commeatum maximè celebre: ibi ambiguus, an illam sedem bello deligeret, circumspectâ infrequentiâ militis, satisque magnis documentis temeritatem Petilii coercitam, unius oppidi damno servare universa statuit. Neque fletu et lacrimis auxilium ejus orantium flexus est, quin daret protectionis signum, et comitantes in partem agminis acciperet. Si quos imbellis sexus, aut fessa ætas, vel loci dulcedo attinuerat, ab hoste oppressi sunt."—*Annalium* lib. xiv. sect. xxxiii.

The undefended and pacific condition of Londinium is evidently indicated by the same authority in the words "barbari, omissis castellis

In this very brief and incidental notice is probably contained the whole of the simple truth concerning Roman London ; which would thus appear to have been in reality no more than the depository of the principal articles of commerce of the time^e. Hence the city would then consist rather of extensive and spacious warehouses than of palaces or temples ; and the improvement of the port, and of the navigable streams which ran into the Thames, would have been the care of the inhabitants rather than the formation of stately streets or the erection of ornamental public buildings. It is possible that some distant idea of the extent of the warehouses of London in the time of Cæsar may be inferred from his statement, that when the Trinobantes desired him to protect Mandubratius from the rage of Cassivellaunus, he required them to supply forty hostages and grain for the whole army, which were very speedily sent^f. Not that it is to be supposed that Londinium

præsidisque militarium, quod uberrimum spoliandi, et defendentibus intutum, læti prædâ, et aliorum segnes petebant." The town and the inhabitants were entirely destroyed by the Britons under Boadicea.

• It will be remembered that this is precisely the character given of London by FitzStephen, eleven centuries after the period referred to by Tacitus. "Ad hanc urbem, ex omni natione quæ sub cœlo est, navalia gaudent institores habere commercia :

"Aurum mittit Arabs ; species et thura Sabæus ;
Arma Scythes ; oleum palmarum divite sylva
Pingue solum Babylon ; Nilus lapides pretiosos ;
Seres purpureas vestes ; Galli sua vina ;
Norwegi, Russi, varium grisium, sabelinas."

Descr. Civit. Landoniæ, edit. Pegge, 1772, 4to, p. 70.

¹ *De Bello Gallico* lib. v. c. xx. An ancient depository of the nature of a granary appears to have been found in Mark lane, about the year 1675, at the depth of 28 feet below the pavement, when there "were dug up many quarters of wheat, burnt very black but yet sound ; which were conjectured to have lain buried ever since the burning of this city, about 800 years before."—*A Letter relating to the Antiquities of London*, by J. Bagford, Feb. 1st, 1714-1715 ; Leland's *Collectanea*, vol. i. p. lxxi. It is difficult to explain what fire of London is referred to in this passage ; but it is most probably that entire destruction which happened in the fourth year of Ethelred, A.D. 981, and that there is an error of a century in the printed copy of Bagford's Letter.

was without fanes and a forum ; but certainly the structures most important to its welfare, in accordance with the preceding character, would be magazines or granaries, shops, and the private residences of the merchant-inhabitants. The last of these were probably very limited in size, like the Roman house lately exhumed in Lower Thames street, on the site of the old Coal-Exchange.

Before quitting this part of the subject, it is worthy of observation that Londinium, though regarded by Tacitus as of inferior note, still retains its name of unknown antiquity, and has become the first city of Great Britain ; whilst it is doubtful whether Camalodunum, though established as a colony of veterans, and adorned with a temple dedicated to Claudius, and a statue of Victory, is now to be identified with Malton near York, or with Malden or Colchester in Essex.

II. *Selection of the Site of London.*

IF, however, the consequence of Roman London has been unduly magnified, the more ancient traditions relating to the origin of the city have been quite as unduly denied and even treated as altogether fictitious. It is certainly possible that the narrative of Geoffrey of Monmouth, so long generally rejected as fabulous, contains some circumstances of truth, though not in connexion with the individuals, nor even the time, to which they are referred. The simple statement of the planting of London, abstracted from the almost mythological personage by whom it is declared to have been executed, not only involves in it nothing inconsistent with probability, but rather resembles that which is beginning to be accepted concerning the Chronicle of Geoffrey, that it is really an ancient truth disguised by later fictions, unadvisedly adopted and

inserted in a genuine narrative. "Brutus," says the famous British History, "having thus at last set eyes upon his kingdom, formed a design of building a city; and, in order to it, travelled through the land to find out a convenient situation, and coming to the river Thames, he walked along the shore, and at last pitched upon a place very fit for his purpose^s."

It is acknowledged that Drayton derived some of the materials of his *Poly-Olbion* from this doubtful history; but it is worthy of remark, that, whilst Strype is evidently sceptical concerning the credit of Geoffrey of Monmouth, he unhesitatingly adopts^h the following nervously-descriptive passage of Drayton, in which the wise choice of the excellent situation of London, as selected by Brutus, is applauded as almost superhuman.

"Oh! more than mortall man, that did this Towne begin,
Whose knowledge found the plot so fit to set it in!
What God or heavenly Power was harbour'd in thy breast,
From whom with such successe thy labours should be blest?
Built on a rising bank within a vale to stand,
And for thy healthfull soyle chose gravell mix'd with sand:
And where faire *Tames* his course into a crescent casts,
That forced by his tydes as still by her he hastes,
He might his surging waves into her bosome send,
Because too farre in length his Towne should not extend.

And to the north and south, upon an equall reach,
Two hills their even banks do somewhat seeme to stretch;
Those two extremers winds from hurting it to let,
And only levell lies upon the rise and set.
Of all this goodly Isle where breathes most cheerefull aire,
And every way thereto the wayes most smooth and faire;
And in the fittest place by man that could be thought,
To which by land or sea provision might be brought:
And such a road for ships scarce all the world commands
As is the goodly *Tames*, near where *Brute's* city stands:
Nor any haven lies to which is more resort
Commodities to bring, as also to transport^l."

^s *Historia*, lib. i. c. xvii.

^h *Stow's Survey of London*, 1720, vol. i. book i. p. 2, 4, 5.

^l *Poly-Olbion*, the Sixteenth Song, 1612, fol., p. 252.

III. *Antiquity of the Port of London.*

AFTER the discovery and planting of London, another true circumstance concerning it, related by Geoffrey of Monmouth, but obscured by tradition, appears to be the original formation of the port by Belinus, at or near the site of the present Billingsgate ; which may not improbably be regarded as the remote commencement of that commercial reputation recognized and recorded by Tacitus. "He also made," says Geoffrey, "a gate of wonderful structure in Trinovantum, upon the bank of the Thames, which the citizens call after his name Belingsgate to this day. Over it he built a prodigiously large tower, and under it a haven or quay for ships. . . . In his days there was so great an abundance of riches among the people, that no age before or after is said to have known the like^k." The latter part of this passage may likewise refer to the wealth produced by the establishment of commerce to London as a trading port. It is worthy of observation that the preceding narrative of the most ancient formation of London, as a harbour, seems completely to support the second conjecture of Camden as to the derivation of its name, *Lhong Dinas*, a Town of Ships^l. The objection offered against it by Maitland, that he could not understand how the place should deserve that name at the time of its foundation, is readily answered, as the great importance of the haven evidently superseded or altered the title by which the city was previously known ; in the same manner as Ammianus Marcellinus states that "the ancient town of Lundinium was by later ages called Augusta^m."

^k *Historia*, lib. iii. c. x.

^l *Britannia* : Trinobantes, Middlesex.

^m Maitland, *History of London*, 1772, fol. i. c. iii. p. 19. Ammian. Marcell., lib. xxviii. c. 3.

In the conjectural plan of Roman London drawn up by Dr. Stukeley in 1722ⁿ, the importance of the port is indicated by the principal highway leading northward extending in a direct line from Belingsgate, instead of passing along the present Gracechurch street. Whatever may be the estimation with which that plan is now regarded, the subterranean examination of those parts, for the construction of new sewers, confirms the conclusion that the present Gracechurch street was certainly not one of the oldest roadways. At the north and south walls of St. Bennet Grace-church, at the south-west corner of Fenchurch street, walls were discovered built across Gracechurch street, of 4 feet in thickness and 22 feet in depth from the surface, continuing down to the point to which the sewer was sunk. Somewhat to the north of Lombard street the excavations passed under a burial-ground filled with interments; and, beside other remains of buildings, walls of 6, 7, and 11 feet in breadth, extending east and west, were found at and near Half-moon passage in Gracechurch street. The truth concerning the oldest highway through London northward would appear to be, that it was really a continuation of the line of the first bridge over the Thames, the head of which was at St. Botolph's wharf^o, the latter having been possibly a part of the great harbour of Belins-gate. A line drawn northwards from this point might have united with Bishopsgate street either at the entrance or at Houndsditch; but there seems to be no reason for considering that Bishopsgate street, both Within and Without, has not been an ancient road. The first stone bridge over the river, finished in 1209, was erected so much westward of the former as to require a new direction to be given to the highway, or perhaps, rather a new street to be constructed, con-

ⁿ *Itinerarium Curiosum*, 1776, fol., vol. i. pl. 57.

^o Cottonian MSS. Faustina A iii., c. xliv. fo. 636.

stituting the modern Fish-street hill and Gracechurch street. This new line appears to be referred to in a manuscript record of the quit-rents of London Bridge, under the name of "the king's road called Brigge street;" and it is also called "London-Bridge street" in a record cited by Madox, of the 52d year of Henry III., 1268p. The same causes led to a similar result in the last rebuilding of London Bridge, and a third line still more to the west has been obtained.

One of the most interesting and perfect of the Roman remains found in London presented itself at no great distance from the ancient line leading northward, and probably formed part of the floor of an apartment of a building of some importance abutting on this road. It consisted of a tessellated pavement, the remains of which are now preserved in the Museum of the East India Company, and which were discovered in December, 1803, at a depth of 9 feet 6 inches below the carriage-way, in searching for a sewer, opposite to the columns at the eastern extremity of the portico of the India House. The whole of the eastern side had been already taken away, probably at the time of making the sewer; and that which remained appeared to be about two thirds of the floor of an apartment of uncertain dimensions, but evidently more than 20 yards square. The ornamented centre, although it was not quite perfect, had been apparently a square of 11 feet. In the centre was a large circle containing a figure of Bacchus crowned with vine-leaves and seated on a tiger, having his thyrsus erect in the left hand, and in the right a drinking-cup. This device was enclosed by three borders of elaborate ornament, forming a square, in the spandrils of which were drinking-cups and flowers, and the whole pavement was completed by the usual broad margin of plain red

p Harleian MSS. No. 6016. *History of the Exchequer*, 1711, fol., p. 534; Mag. Rot. 52 H. III., membr. 1 a.

tiles. Supposing that this very beautiful tessellation were discovered *in situ*, the building in which it was found would, in all probability, have stood in the line of the ancient road from Billingsgate. Possibly, from the festive character of the subject, the pavement may be considered to have formed part of the floor of a *Triclinium* or banquet-room in a mansion or villa, but it offers no additional proof of any great *public edifice* having existed upon the spot. Another tessellated pavement, now in the British Museum, also very ornamental, though inferior to the preceding, was found in 1805, in Lothbury, about 20 feet westward of the western gate of the Bank. None of the London pavements, however, appear in themselves to convey the impression that they ever constituted parts of temples, and certainly there have not been any architectural remains discovered with them to prove that they were so.

IV. *Remains of great Public Buildings not found in London.*

DR. STUKELEY'S plan suggests eight sites for the public buildings of Roman London: namely, the *Arx Palatina*, or Tower, on the extreme east; the grove and temple of Diana, at the most western boundary; the churches of St. Mary de Arcubus and of St. Helen; the Forum, on the opening afterwards occupied by Stocks Market; the *Milliarium*, or London Stone; and an episcopal residence about the situation of the Royal Exchange. Of these edifices, however, as well as of such others as might really have existed, no material traces have been discovered, nor does the city appear ever to have exhibited any such stately and extensive architectural remains as those which have been found at York, Bath, St. Alban's, Dorchester, and many other places.

This entire disappearance of Roman buildings may probably be attributed to the devastation to which London has been exposed at two periods of the civic history very widely separated from each other. If any of the edifices of the most flourishing ages of Londinium remained to the mediæval period, they must have been reduced to ruins by that fatal conflagration in 1136, which began at the house of Ailward near London Stone, and consumed all the city between Aldgate eastward and St. Erkenwald's shrine in St. Paul's on the west. Whatever architectural remains continued to exist after this and similar casualties were probably altogether subterranean ; and if they were not destroyed in the Great Fire of 1666, they may have been overthrown, taken down, built on, or buried, in the emergent haste with which the new city was required to be raised. It cannot, however, be supposed that Sir Christopher Wren was in the least indifferent to such ancient work or reliques as came under his examination ; for, on the contrary, there is the strongest contemporaneous proof that he had carefully observed and recorded them. This is stated by Dr. Woodward in the following passage of his letter to Sir Christopher, as published by Hearne. "As to the remains of Roman workmanship that were discovered upon occasion of rebuilding the city, no man had greater opportunity of making remarks upon them than yourself ; nor, Sir, has any man ever done it to better purpose. And, as you have long promised me an account of those observations, so I shall ever insist upon it, and not cease to challenge it as a debt your generosity has made due to me, till you acquit yourself of the obligation." These notes, however, do not appear to have been ever reduced to a methodical form by the author ; since the Editor of the *Parentalia* states that the section of that work relating to the subject was one of those "put together

¶ *Leland's Itinerary*, vol. viii. Appendix, p. 13, sect. 5.

in 1728 out of some scattered papers and publick accounts, such as the collector hath hitherto met with^r."

In this short statement is contained a remarkable confirmation of the extremely limited nature of the existing Roman architectural remains of London. The principal discovery was made beneath the church of St. Mary-le-Bow, Cheapside, where the pavement and the walls, including the windows, of a building, apparently a temple, were disinterred; with part of a Roman causeway, 4 feet in thickness, under the present steeple. Sir Christopher Wren considered that this causeway passed along the north boundary of Londinium; and that parallel to it, between Cheapside and the Thames, was constructed the Prætorian Way or Watling street.

But although the road so called is usually considered to have extended in the direction of the modern Watling street, the excavations for sewers show that it did not in reality exist there. Along the whole length of Cannon street not the slightest appearance of such a causeway was discovered; and in Watling street itself, though thirteen shafts were sunk between Bow lane and St. Paul's, besides the open cutting, there was not any ancient road encountered. In addition to this negative proof, sewers have been constructed in all the lanes between Thames street and Cheapside, which must have cut through the road had it lain in the direction commonly supposed, without any appearance of it having been found. A Roman way was reported to have been discovered in Eastcheap, but after a careful examination all the authority for the statement appeared to be a few square tiles turned up in the earth, and some more built up in the area-walls of one of the houses on the north side. A large quantity of old pave-

^r *Parentalia*, Lond. 1751, fol., part ii. sect. i. p. 264; "Of London in ancient times, and the boundary of the Roman colony discerned by the Surveyor after the Great Fire."

ment exists beneath the present surface of the streets in the city; but it is known to be all of English work, and but little older than the Fire of London, excepting in two instances. One of these occurred in Ave-Maria lane, where a gravelled road was found 3 feet in thickness; and nearly in the middle of Aldgate High street a pebble channel was discovered of an early date, even if it were not Roman, with ancient mutilated pottery lying upon it.

In connexion with this curious rectification of a popular impression concerning one of the principal streets of Roman London—derived from the only contemporaneous means of illustration now in existence—another traditionary mistake may not improperly be noticed, as having been developed by the same opportunities of examination. The result of sewerage excavations shows that the water called the Langbourn, if it ever existed at all as a natural streamlet, did not actually run in the direction so explicitly described by Stow. “Langborne water,” says that author, “so called of the length thereof, was a greate streame of water breaking out of the ground in Fan-church streete, which ran downe with a swift course west through that streete, thwart Grass street and downe Lombarde street to the west ende of St. Mary Wolnothe’s church; and then, turning the course south, downe Shareborne lane—so termed of sharing or dividing—it brake into divers rilles or rillets to the river of Thames. Of this bourne that warde took the name, and is till this day called Langborne warde. This bourne, also, is long since stopped up at the heade, and the rest of the course filled up and paved over, so that no signe thereof remaineth more than the names aforesaide.”

The last sentence of this passage evidently indicates that Stow, of his own knowledge, had not any personal acquaint-

^a *Survey of London*, 1598, p. 13.

ance with the Lang-bourn; and that the description of it was as traditionary to him as it is at the present time. He admits this in his subsequent account of Langbourn ward, where he states that the "long borne of sweete water," on "turning south and breaking itself into many small shares, rilles, or streames, left the name of Share-borne lane, or South-borne lane, *as I have read*, because it ranne south to the river of Thames^t."

That the Lang-bourn, however, could not really have flowed from Fen court westward, appears to be certain from the fact that the ground rises upwards of 3 feet from Mincing lane to Gracechurch street; and not only is the present surface thus elevated, but the ancient surface, though it lies 17 feet below, has the same inclination; the top of the loam being nearly co-incident with that of the existing soil. Hence, it will be evident that the water could not have flowed in a direction contrary to the rise of the ground; and there is also but little probability of any stream having run either eastward or westward along the side of a hill which declined still more rapidly towards the south. In excavating for sewers in Gracechurch street, though the traces of the Lang-bourn were carefully sought after, not any indications could be found of a stream having crossed it. There appears to be also very little probability that it could have risen westward of Gracechurch street, and then, having passed along Lombard street, to have separated into rills at Sherbourn lane, as this would have been altogether too short a course for the water distinguished by the name of the Long-bourn. Such a termination, however, of a stream flowing over such a surface is not improbable, as it could have been supplied only from the water within the gravel. At Nag's-head court in Gracechurch street the top of the gravel is now 16 feet below the surface, and the spring

^t *Survey of London*, 1598, p. 156.

from which the stream was supplied must have been some feet lower. As, however, there doubtless existed some foundation for the tradition of the reported course of the Langbourn, it may perhaps be truly regarded as having been an ancient artificial trench, all traces of the real direction of which were taken away at some very early period in the history of the metropolis.

V. *Supposed Temple of Diana on the site of St. Paul's Cathedral.*

A VERY important edifice of Roman London was expected to be developed on the rebuilding of St. Paul's after the Great Fire, in the remains of that temple of Diana so generally and confidently affirmed to have stood on the site ; but the expectation was certainly not realized. The tradition is principally supported by the authority of a passage in Camden's *Britannia*, which states that certain ancient buildings adjacent to the cathedral are called *Camera Dianæ* in the church records. "And in the reign of Edward I.," continues the same author, "were dug up in the churchyard, according to our chronicles, an incredible number of ox-heads, which were beheld by the multitude with astonishment, as remains of heathen sacrifices ; and it is well known to the learned that *taurobolia* were celebrated in honour of Diana." To this conjecture it is answered by Selden, that those sacrifices had no connexion with heads or any other parts of oxen, and that they were not offered to Diana at all, excepting in her temple on Mount Aventinus. Camden himself also appears subsequently to have thought that the animal skulls rather illustrated a well-known passage in the famous letter of Gregory

the Great to Augustine, in which he says "Whereas the pagans have been accustomed to immolate great numbers of oxen, this practice ought to be converted by christians into the solemnity of a religious feast^w."

When the foundations of the new St. Paul's were excavated by Sir Christopher Wren, as he did not discover any such remains as the preceding, he rejected the tradition of the temple as fabulous; but the antiquities which were met with have been adduced as another proof of the truth of it. In prosecuting his design, says the Editor of the *Parentalia*, the Surveyor came to a pit at the north-east corner, whence "all the pot-earth had been robbed by the potters of old time. Here were discovered quantities of urns, broken vessels, and pottery-ware, of divers sorts and shapes. How far this pit extended northward there was no occasion to examine: no ox-skulls, horns of stags, nor tusks of boars were found, nor any foundations more eastward. If there was formerly any temple to Diana, he supposed it might have been within the walls of the colony and more to the south^x." In the account of this pottery given by Strype it is stated to have consisted of the fragments of Roman sacrificing-vessels, "of divers shapes and sizes, as occasion should require them to be made use of in their sacrifices. On the south side of the said west end was found a potter's kiln, the shape of which was circular. In this the abovesaid sacrificing-vessels probably were made. It was near to the temple where Diana was worshipped, for the more convenience of the people that came thither to sacrifice, that they might be furnished with all sorts

^w *De Synedriis veterum Ebraeorum* lib. iii. cap. xiv. sect. ix; *Seldeni Opera*, vol. i. col. 1787—1789. "Suâ manu postea in codice suo (in Bibliothecâ Cottonianâ) adnotavit illic ipse, ut conjecturam de sacrificiis hic bubalinis firmaret:—'Ubi pagani (inquit Gregorius M.) boves multas immolare consueverent, christiani religiosi convivii debitas solennitates celebrent.'"

^x *Parentalia*, p. 286.

of vessels they had occasion for at the time when they made their sacrifices^y." This latter supposition seems to be entirely gratuitous, and was doubtless intended principally for the gratification of Dr. Woodward, in whose copious and interesting collection of Roman antiquities found in London many of those specimens were preserved, and who appeared to be especially anxious to prove that the tradition concerning Diana's temple was founded in fact. The authority which he adduces for it is a very quaint and curious though inconclusive passage in Burton's Commentary on the Itinerary of Antoninus^z, which was answered by Bishop Stillingfleet^a, and the conclusion of the Letter of Dr. Woodward, in which these circumstances are referred to, manifestly expresses his great desire to establish the existence of a heathen fane by the evidence of his own antiquities. "Of this," says the Letter, "we have a sample in the various things digged up near St. Paul's church. In particular, as well the tusks of bores, horns of oxen and of stags, as the representations of deer, and even of Diana herself, upon the sacrificing-vessels; of all which there are instances in my collection: nay, I have likewise a small image of the goddess that was found not far off. These plainly enough import that there was thereabouts a temple of Diana; as has been indeed the common tradition and opinion. Nor assuredly would the very learned writer who has lately called this in question ever have done that had he known of these things, and that there was yet remaining such evidence there of the sacrifice of stags, which he allows to be the proper sacrifice to Diana^b." Strype also adduces this passage,

^y *Stow's Survey*, vol. ii. Appendix, c. v. p. 23.

^z *A Commentary on Antoninus his Itinerary, or Journies of the Romane Empire, so far as it concerneth Britain*, Lond. 1658, fol., p. 169.

^a *Ecclesiastical Cases: part II. with a Discourse on the Antiquity of London*, Lond. 1704, 8vo, pp. 147, 542.

^b *Letter to Sir C. Wren*, sect. 33; *Leland's Itin.*, vol. viii. App. p. 33.

cautiously stating it to be "the argumentation of the learned Dr. Woodward, Professor of Physick in Gresham College^c." The Editor of the *Parentalia*, in noticing the incredulity of Wren as to Diana's temple, supposes that "the antiquities said to have been found there, in proof of these relations, were never brought to his view^d," evidently referring to the horns and ox-skulls said to have been disinterred on this spot, as with the collection of Dr. Woodward there is no doubt that he must have been perfectly familiar,

Some other reliques of Roman work inconclusively adduced in proof of the existence of the temple were two terra-cotta lamps, formerly in the collection of Mr. John Kemp, also affirmed to have been dug up in the excavations at St. Paul's. One of these was found with some tusks of boars, and was embossed with a figure of Diana in a hunting posture; and on the other, which was engraved for Dr. Knight's *Life of Erasmus*, was the representation of several large buildings, like a city, on the banks of a river, which Mr. Kemp supposed to be the actual figure of the Temple of Diana itself.

The last point of evidence in favour of the heathen edifice which remains to be noticed is, that in an ancient manuscript in the Cottonian Library, relating to the erection of the first church dedicated to St. Paul, there occur the words "immolat Dianæ Londonia, thurificat Apollini suburbana Thorneia^e," to which Wren replies explicitly, as follows: "I imagine the monks" (of Westminster) "finding the Londoners pretending to a temple of Diana where now St. Paul's stands (horns of stags, tusks of boars, *etc.*, having been dug up there in former times, and it is said also in later years), would not be behind-hand in antiquity; but I must assert that, having changed

^c *Stow's Survey*, vol. i. book iii. c. viii. p. 141.

^d *Parentalia*, p. 303.

^e *The Life of Erasmus*, by Samuel Knight, D.D., 1726, p. 299, 301.

all the foundations of old St. Paul's, and upon that occasion rummaged all the ground thereabouts, and being very desirous to find some footsteps of such a temple, I could not discover any; and therefore can give no more credit to Diana than to Apollof."

VI. *Ancient Works for improving the River side.*

BUT whilst it is thus shown that no material traces have been found of the buildings of Roman London, there is abundant evidence of the care and skill anciently employed for the substantial support of the haven, and even for the gaining of ground from the river in the construction of quays; thus strengthening the view already expressed, that the commercial convenience of the city, as a port, was always regarded as an object of the first importance. In a very large space which was cleared in 1813, on the south side of Thames street, for the foundation of the present Custom-house, three distinct lines of wooden embankments were found, at the several distances of 53, 86, and 103 feet within the range of the existing wharf. At the same time, about 50 feet from the camp-shot or outer edge of the wharf-wall, a wall was discovered, erected east and west, built with chalk-rubble and faced with Purbeck stone, which was considered to be either some part of the ancient defence of the city, or some outwork of the Tower extending westwards. There was not, however, a trace of any important structure met with throughout the whole of the enormous area which was then laid open; but between the embankments were found the remains of buildings, inter-

[†] *Parentalia*, p. 296.

[‡] *A Description of the New Custom House*, by David Laing, F.S.A., Lond. 1818, fol. pp. 5, 6.

mixed with pits and layers of rushes in different stages of decomposition : those which occurred at the depth of 18 feet in Thames street had become a complete peat.

The excavations for sewers, constructed along this part of the boundary of London, appear satisfactorily to have ascertained that nearly the whole south side of the road forming the line from Lower Thames street to Temple street has been gained from the river by a series of strong embankments. At the making of the sewer at Wool-quay, the soil turned up was similar to that discovered at the Custom-house ; and the mouth of an ancient channel of timber was found under the street. The ground also contained large quantities of bone skewers about 10 inches in length, perforated with holes in the thicker ends, recalling the bone skates employed by the youths of London about the end of the twelfth century, as described by FitzStephen^h. Between Billingsgate and Fish-street hill, the whole street was found to be filled with piling ; and especially at the gateway leading to Botolph-wharf—which, it will be remembered, was the head of the oldest known London Bridge,—where the piles were placed as closely together as they could be driven ; as well as for some distance on each side. In certain parts of the line, the embankment was formed by substantial walling, as at the foot of Fish-street hill, where a strong body of clear water gushed out from beneath it. At the end of Queen street also, and stretching along the front of Vintners' Hall, a considerable piece of thick walling was encountered ; and another interesting specimen was taken up, extending from Broken wharf to Lambeth hill. At Old Fish-street hill this embankment was found to be

^h “ Sunt alii super glaciem ludere doctiores, singuli pedibus suis aptantes, et sub talaribus suis alligantes, ossa, tibiae scilicet animalium, et palos ferro acuto supposito tenent in manibus, quos cum aliquando glacies allidunt, tanta rapacitate (*sic omnes libri*) feruntur, quanta avis volans, vel pilum balistæ.”—p. 78.

18 feet in thickness ; and it returned a considerable distance up Lambeth hill, gradually becoming less substantial as it receded inland. Both of these walls were constructed of the remains of other works, comprising blocks of stone, rough, squared, and wrought and moulded, together with roofing-tiles, rubble, and a variety of different materials run together with grout.

VII. *The Fleet and the Wall-brook Rivers.*

THE ancient navigable Rivers of London, flowing into the Thames, were the works next in commercial importance to the embankments. That the Fleet or Turnmill-brook was originally such a stream appears to be indicated by anchors having been found in Spa-fields and at St. Pancras¹; but by encroachments on the banks, and the soil continually thrown into the water, it became almost filled up. At the time of the Great Fire the Fleet was only a ditch, crossed by two stone bridges, and two wooden bridges for foot-passengers ; but all the small tenements and sheds erected on it being then destroyed, the Act for Rebuilding London provided that the channel should be sunk and widened, so that it should be again made navigable. From November, 1673, to September, 1734, the Fleet existed as a canal, 40 feet in width, crossed by four bridges^k, and bounded by wharfs and rails, which allowed of two lighters meeting and passing. This canal, however, was at length filled with mud as before, and the

¹ Maitland, *Hist. of London*, vol. i. p. 571.

^k In March, 1840, the sewer at Holborn hill was opened ; and, as I was then accidentally passing, I saw the southern face of the bridge which crossed the Fleet at that place uncovered to some extent. It was built of red brick, and the arch was of about 20 feet span. The road from the east intersected the bridge obliquely, which irregularity was obviated by a

charge of cleansing it above Fleet-bridge amounted to more than its annual produce ; wherefore, continues Maitland, it was again neglected, and the rails on each side being decayed, many persons perished by falling into it by night, and beasts by day. It was therefore arched over and levelled by virtue of an Act of Parliament, and Fleet market subsequently erected thereon, and opened September 30th, 1737.

If the same circumstantial information were now extant concerning the Wall-brook, its history would probably be found to be very like the preceding, since all that is known relating to it is remarkably similar. The period when it was vaulted over, however, being at the least three centuries earlier than the covering-in of the Fleet, an inaccurate notion is generally entertained concerning it, and the Wall-brook is usually considered to have been only a narrow stream, deriving its name from entering through the city wall near Moor-gate, and running with an irregular course down to the Thames at Dowgate. Recent excavations have, however, shown that, though short, it was really an important channel, fed by several rills, which all met on the north side of the city ditch in Moorfields, five of which are still in existence as sewers. The main trunk of the Wall-brook is only partially extant, from the circumstance that it has been turned out of its course by modern works ; although it may be distinctly traced by the uniform and compact properties of the city Companies which stand directly upon the line of it. Commencing at its influx to the Thames, there are now found along the course of the Wall-brook, on the western bank, the halls of the Innholders, the Dyers, the Joiners, the Skinners, the Tallow-

moulded and well-executed stone corbel, arising out of the angle thus formed, which carried the parapet. On the plinth-course of the parapet was cut the inscription following, recording the fact of the erection of the bridge, with the name of the Lord Mayor at the period.

WILLIAM HOOKE(R), (A)NNO . D . 1674.

chandlers, and the Cutlers ; and then intervened the churches of St. John and St. Stephen upon Wallbrook, the latter of which formerly stood considerably westward of the present building. After these edifices, followed the structure called "the Old Barge," at Barge yard, and Cornette's tower in Buckle's bury ; and the line of the river is then shown by the present St. Mildred's church and court, Grocers' hall, Founders' hall, the church of St. Margaret Lothbury, and the estates of the Drapers and Leathersellers, until it passed through the wall between Bishopsgate and Moorgate.

Such appears to have been the course and extent of the Wall-brook as it ran through the city ; and with respect to the width of it, the sewerage excavations in the streets called Tower-Royal and Little St. Thomas Apostle, and also in Cloak lane, discovered the channel of the river to be 248 feet wide, filled with made-earth and mud, placed in horizontal layers, and containing a quantity of black timber of small scantling. The form of the banks was likewise perfectly to be traced, covered with rank grass and weeds. The digging varied from 18 feet 9 inches to 15 feet 6 inches in depth, but the bottom of the Wall-brook was of course never reached in those parts, as even in Princes street it is upwards of 30 feet below the present surface. A record cited by Stow¹ proves that this river was crossed by several stone bridges, for which especial keepers were appointed ; as also that the parish of St. Stephen-upon-Wallbrook ought of right to scour the course of the said brook. That the river was navigable up to the city wall on the north is said to have been confirmed by the finding of a keel and some other parts of a boat, afterwards carried away with the rubbish, in digging the foundations of a house at the south-east corner of Moorgate street. But

¹ "I haue read in an olde written booke intituled The Customes of London."—*Survey of London*, 1598, 4to, p. 13.

whether such a discovery were really made or not, the excavations referred to appear at least to remove all the improbability of the tradition that "when the Wall-brook did lie open barges were rowed out of the Thames or towed up to Barge yard." As the church of St. Stephen-upon-Wallbrook was removed to the present site in the year 1429, it is probable that the river was "vaulted over with brick and paved level with the streets and lanes through which it passed," about the same period; the continual accumulation of mud in the channel, and the value of the space which it occupied, then rapidly increasing, equally contributing to such an improvement^m.

VIII. *The ancient Soil and Ground of London.*

HAVING illustrated some principal features of Roman London as a commercial port, these observations may be properly concluded by a statement of such particulars of the character of the ancient soil of the city, and particularly of the northern side of it, as have been developed by the excavations in that part.

Within the walls, the city appears to have occupied two small hills of gravel and loam capping the London clay, the whole of which was covered by the ordinary thickness of vegetable earth. Outside the wall, on the western half, the ground rose from the valley of the rivulet now called the Fleet sewer, towards Fetter lane, and then fell westward; and it was also elevated again towards Holborn bars, whence the direct line continued to the west comparatively level. On the south, the ground sloped to the Thames, and on the east declined into the Fleet. Above that river, on the ascent of the

^m *Survey of London*, 1598, 4to, p. 208, 182, 13.

western hill of the city, was erected Lud Gate, commanding the Fleet, and situated at only a convenient distance from it at the time when the stream was navigable and full. The soil on the outside of the walls of London was similar to that on the inside, loam and gravel over the blue clay.

On the north side of the city, Alders Gate and Cripple Gate were erected in a more hollow ground, and between the latter entrance and Bishops Gate there existed a considerable cavity, intersected by a sort of tongue of higher land, now forming the line called "the Pavement" in Moorfields; but all the lower grounds appear to have been originally dry. Bishops Gate and Ald Gate occupied still higher land, the ground withoutside the wall declining from the city.

The marshy nature of the soil on the north of London was for many centuries so notorious as seemingly to have led to the conclusion that the land had been the same at all periods of the history of the metropolis. Sir Christopher Wren was inclined to believe that Cheapside had formed the original boundary of the Roman colony. When he erected a new eastern end to the church of St. Lawrence Jewry, after sinking down 7 feet for a foundation, he was obliged to have piles driven for 12 feet lower; whence he concluded that if there were not a causeway across the marsh, there could not be any reason for a gate in that directionⁿ, furnishing a strong proof that Cheapside had been the northern limit. From the contemporaneous evidence of FitzStephen, it is known that about the year 1182, on the north of London were corn-fields, pastures, and delightful meadows intersected by pleasant streams, on which stood many a mill; and beyond them extended an immense forest^o. The same author, however, in

ⁿ *Parentalia*, p. 265.

^o "Item, a Borea sunt agri, pascuæ, et pratorum grata planities, aquis fluvialibus, ad quas molinorum versatiles rotæ citantur cum murmure jocoso. Proxime patet ingens foresta."—p. 60.

another place describes the diversions of the youth of London "when that vast fen (or lake) which waters the walls of the city towards the north, is hard frozen^p." This place appears to have been really a piece of water, in which the city possessed a right of fishery; but "the moor without the postern called Cripplesgata" was given to the collegiate church of St. Martin-le-grand by William I., in 1068^q. It may therefore be supposed that the marsh was gradually and artificially increased, especially about the year 1213, when the citizens completed a series of ditches to surround and strengthen the walls of London.

The truth of this conjecture also appears to be confirmed by local excavations, which have shown that, eastward of Aldersgate, the ditch was in part an artificial trench, so far as to Little Moorgate, a postern formerly standing near the south end of the present Blomfield street, and from thence to the Tower it was entirely an excavated channel. On the west of Aldersgate likewise, the ditch had been made by cutting, although the ground was somewhat depressed in part of its course by passing along the side of a hill. It seems to be exceedingly probable that, at the time of excavating this ditch, the bed of the Wall-brook was raised, and the rills by which it was fed artificially intercepted in their course, so that their waters were thrown into the hollow ground, and gradually formed first a lake, and ultimately a marsh on the outside of that part of the city wall. This moor stretched northwards to the site of the present Finsbury square, but it was much less considerable on the western side of the high strip of ground now indicated by "the Pavement," than it was on the east. On the south, the marshy land extended nearly so far as the north

^p "Cum est gelata palus illa magna quæ moenia urbis æquilonia alluit."—p. 78.

^q Dugdale, *Monast. Angl.*, vol. iii. 1673; *Ecclesiæ Collegiatæ*, p. 26.

side of Threadneedle street to Shorter's court in Throgmorton street. The ancient state of this latter part of the city may be better understood from the circumstance that a considerable extent of tan-pits was found at the time of the erection of the Auction Mart. A piece of tessellated pavement, consisting of a scroll of ivy leaves in black upon a white ground, was found in a deserted cellar in Bartholomew lane, but as it was evidently not *in situ*, no conjecture can be formed concerning the building to which it belonged.

That much of the ground on the north side of the city wall was anciently dry, and that not any marsh originally existed there, was further proved during the construction of a sewer in London Wall, to which the cutting ran parallel and below its basis. Eastward of Carpenters' Hall, a mass of rubble masonry, of about 12 feet in thickness, was cut through; and in the centre was found a culvert, or Roman sewer, in which were discovered three iron bars in perfect preservation, enclosing a human skeleton, the skull of a dog, and the stem of a stag's horn, together with a silver coin of Antoninus, and a copper coin of Faustina. Beyond this point the crown of the culvert had been broken in, and a fragment of a rudely-wrought column had fallen through the breach. As the ancient sewer passed under houses no further examination could be made in this direction; but on the south side it was not only found to be perfect, but even the mouth of it was discovered under a house at the north-east corner of Carpenters Buildings. The sewer was constructed of small thin tiles, cemented together by very thick joints of red mortar, made of pounded tile, and having a large pebble inserted in the centre of each. From the top of the sewer to the opposite bank of a ditch into which it discharged itself were placed several pieces of timber scantling in a sloping direction; and a considerable quantity of long moss, undecayed and still re-

taining a greenish colour, was taken from between them. The ditch for receiving the contents of the sewer was made on the south side of the remains of a strong work, like part of a fortification, about the site of Little Moorgate, or the entrance of Blomfield street. As the depth from the present surface to the bottom of the sewer was 18 feet 4 inches, and the open ditch of the fortress was still deeper, it is evident that, at the time when they were constructed, the adjacent ground was dry and substantial, for the later accumulation of soil was so soft, that at one part the bricks could scarcely be laid. The ground gradually improved in consistency up to the north end of Blomfield street, and at Wilson street strong gravel was reached, containing a very fine flow of water.

IX. *The First Collections of London Antiquities.*

FROM the preceding statements it may be regarded as at least probable, that the real renown of Roman London consisted in its fame as an eminent and a spacious commercial port. The proof of this is to be found in the ancient importance of the harbour, and the subterranean works recently existing of the embankments, the rivers, the roads and out-works, and in the remains of a few private dwellings; and not by the ruins of extensive public buildings proper to a stately metropolis. The very numerous specimens of Roman arts and manufactures, discovered during the last two centuries in all parts of the city, prove, however, that most of the conveniences and some of the elegancies of the nation had been introduced into Londinium. These reliques must always possess a considerable intrinsic value as illustrations of society and manners, and also a peculiar local interest, as indicating the condition of the place and people where they were found; though

they cannot always be implicitly relied on as conclusive evidence of the nature of the buildings formerly standing on the spots where such antiquities were discovered.

The Tradescant family is usually regarded as having formed the first considerable collection of natural and artificial curiosities in England ; but, with the exception of coins, only six Roman articles occur in the catalogue of the Museum published by John Tradescant junior, in 1656, and only one of these is distinguished with the name of the place where it was found. After the collection passed into the possession of Elias Ashmole, it was very considerably increased ; and, as it was not transmitted to Oxford until 1682, he probably added to it many specimens of London antiquities discovered after the Great Fire.

From the time of the rebuilding of the city, the importance of preserving such reliques, especially Roman remains, appears to have begun to be rightly perceived ; and one of the first and most successful collectors of such specimens was Mr. John Coniers, an apothecary of London, who was living at the period. By his researches and industry were brought together most of those numerous Roman vessels and articles of every kind which afterwards formed the extraordinary museum of Dr. John Woodward, who bought the principal part of the collection. After his death in 1728, such parts of his museum as were not bought by the University of Cambridge were “ sold by auction at Mr. Cooper’s, in the Great Piazza, Covent Garden,” in a thirty-three days sale, the last three of which were occupied by the celebrated Roman shield and the miscellaneous antiquities. The description of most of the articles contained in the second part of the *Museum Woodwardianum*—the sale-catalogue of Dr. Woodward’s library and curiosities, will be found extremely slight and unsatisfactory, at least to the London antiquary ; though well

drawn up in latin, probably by the eminent lexicographer Robert Ainsworth, whose dissertation "De Clypeo, sive votivo sive equestri," is added to the tract. As this was certainly the most copious and valuable collection of London antiquities ever made, and, as it was originally formed under such unhappily-favourable circumstances,—that it has been dispersed,—and that there does not exist any particular descriptive account of it, are both greatly to be regretted ; especially as it is evident how much the possessor desired that such a description should be compiled and published by any person competent to the work. The attempt of Dr. Woodward to induce Sir Christopher Wren to describe the remains of Roman London which had been discovered, has been already noticed ; and in his published letter to the same eminent person he has the following characteristic passage, which is remarkably expressive of the same desire as to his own collection. "Several of these" (antiquities) "were collected by Mr. Coniers, who was living at that time," (the rebuilding of London) "and very indefatigable in his inquiries. 'Tis great pity he had not encouragement to set forth some relation of them ; but his having only the returns of his profession to depend upon, and there being at that time so very few that were forward to contribute anything to the support of such studies, however curious and useful, posterity has been deprived of the benefit of his. All that I am able to retrieve from the remains of his collection that I purchased, or the many other things that I have since procured, shall be most freely imparted, either to Mr. Strype (to whose diligence the learned world stands greatly indebted, and who is now actually engaged in setting forth a new edition of Stow's *Survey of London*, with enlargements), or to any other person who has leisure and capacity to turn them to the pleasure and advantage of the publick : so soon as, Sir, you shall please to

communicate your observations, which will be of great use, and ought by no means to be any longer withheld and suppressed^r."

The Rev. John Strype so far fulfilled Dr. Woodward's wishes as to insert a short though an interesting summary of this collection in the Appendix to his edition of Stow's Survey, which he thus concludes: "Indeed, the far greater part of these things is so very considerable, that it would afford much satisfaction to inquisitive people to see *icons* graved of them; and that the possessor could have spared so much time from his business and his other studies as to have writ his own observations and reflections upon them, that I might have entered them, as I requested of him, in this work^s." All that is extant by Dr. Woodward concerning these remains is contained in his Letter to Sir Christopher Wren.

Three other contemporaneous collectors of London antiquities were Dr. Harwood, Bagford, and Kemp. John Harwood, F.R.S. and D.C.L. of Doctors' Commons, says Strype, "has been very exact in taking notice from time to time of these antiquities; and hath sorted and preserved a great many of the most curious and remarkable of them: and supposeth, by a probable conjecture, that here—on the site of the church of St. Mary Woolnoth in Lombard street—was not only a pottery, but that on this place, or near it, stood the temple of Concord, which our Roman historians speak of to have been in this city when called Trinobantum^t."

John Bagford, being a bookseller, confined himself chiefly to the collecting of materials for a history of printing and bookbinding, and gave such curiosities as he occasionally found to others, as Hearne notices to have been his practice

^r *Letter to Sir C. Wren*, sect. 6; Leland's *Itin.*, vol. viii. App. p. 14.

^s *Survey of London*, 1720, vol. ii. book vi. c. v. p. 22.

^t *Ibid.* p. 24.

with regard to coins^v. Strype relates of him that, being studious of antiquities, and especially of such as related to the city, he took up with his own hands some of the many pieces of red pottery found at digging of the foundations for the rebuilding of St. Paul's. These, with the moulds for making Samian ware, discovered near a kiln on the south side of the west end of the old cathedral, subsequently formed part of the museum of Dr. Woodward.

The collection of John Kemp is described in a small volume published in 1720, in latin^w; and it may be regarded as remarkable chiefly for containing the two terra-cotta lamps already noticed, which have been offered as evidence that the site of St. Paul's was once occupied by a temple dedicated to Diana. Kemp died in the year 1717; and the collection appears to have been sold by auction, and to have produced 1090*l.* 8*s.* 6*d.* It was formed principally in France, in the seventeenth century^x.

From the time of these original preservers of London antiquities, the custom of observing and recording their discovery appears to have generally commenced, with more or less of intelligence and accuracy in the description and delineation of such remains. At the present time, however, the practice has

^v "That he might be the better acquainted with the Roman stations, and the several motions of the souldiers from one place to another, he used to pick up coyns; and would, upon occasion, discourse handsomely and very pertinently about them: yet he would keep none, but would give them to his friends, telling them, for he was exemplarily modest and humble, that he had neither learning nor sagacity enough to explain and illustrate them, and that therefore it was more proper they should be in the possession of more able persons."—*Hemingi Chartularis Ecclesiæ Wigorniensis*, edit. T. Hearne, Oxon. 1723, 8vo, vol. ii. Appendix, p. 661.

^w *Monumenta Vetustatis illustrata Kempiana: in duas partes divisa: quarum altera mummiæ, simulacra, etc., altera nummos continent; cura R. Ainsworth et J. Ward*, Lond. 1720, 8vo.

^x *Anecdotes of Literature and scarce Books*, Lond. 1807, 8vo, vol. i. p. 38—42.

been long since established in a highly improved form ; and the reports which are now so frequently published, in illustration of the ancient reliques of all periods, often exhibit such an amount and variety of antiquarian learning as seemed in the last century to be almost unknown. This increased intimacy with the nature and value of antiquities has led to their more careful preservation and better exhibition, as well in public local depositories as in private collections. One of the former is the Museum established in connection with the Corporation Library at Guildhall, for the reception of antiquities relating to London, especially such as may be discovered in the execution of civic public improvements, which it is certain cannot rightly belong to any other depository. Many such interesting remains have been accordingly placed at Guildhall by the Commissioners of Sewers, and also by various donors ; a descriptive list of which, to the year 1840, is printed at the end of the last edition of the Library Catalogue.

X. Excavations and Discoveries at the New Royal Exchange.

As it was always anticipated that some important discoveries might take place in excavating the foundations for the New Royal Exchange, proper arrangements were made on the commencement of the work, that any articles of interest then disinterred should be secured for the Gresham Committee. In the Specification for the Works, issued in 1840, the Contractor and Excavator were required, in taking out the soil, to deliver up “ any plate, coins, antiquities, or curiosities, whether in metal or otherwise, or any carved stones or carvings in marble, pottery, terra-cotta, or tesserae, which may be found in the course of the excavations : it being understood that all such matters or things are to be taken up with all requisite

care, and are to remain the property of the Gresham Committee." For the general information of the labourers employed, the copy of an order, founded upon this condition, was displayed in every part of the enclosure erected for the building, directing that all antiquities should be preserved and brought to the clerk of the works, who would remunerate the parties according to the value of the articles found. The following descriptive catalogue shows that many such interesting articles were faithfully delivered; and the original manuscript titles attached to them at the time of their discovery have been carefully preserved, which record the time and place where they were found, with the names of the parties finding them, and the amount of recompense paid to each.

The eastern portion of the site of the Royal Exchange was the first part excavated, and it supplied but very few reliques of any considerable antiquity. Throughout the whole of that space, it was evident that the surface had been already disturbed down to the depth at which Roman remains might be expected to occur; and the fragments of tiles and buildings occasionally discovered showed that older walls and foundations had been previously taken away. It was not then until the works had advanced nearer to the centre of the late Royal Exchange that any remarkable appearance was developed; and the result of the excavations there will most properly be derived from the Report made to the Grand Committee for Gresham affairs, dated May 4th, presented to the Court of Common Council, July 21st, 1841.

This Report shows that, in proceeding with the excavation of the merchants' area, the soil proved to be much more disturbed than it had been previously found; and in this very limited space thirty-two cesspools were opened, some of them being of considerable size, and a few articles of curiosity were taken out of them. They were all carefully cleared out down

to the solid ground, and filled up with concrete. From the unsatisfactory state of the ground generally, it was considered prudent to have this area excavated to the same level as the other parts of the foundation, and to put in the stratum of concrete of an uniform thickness. Excepting in the instances of the cesspools before-mentioned, the soil was found to consist of vegetable earth, accumulations, and broken remains of various kinds, with gravel at a depth of 16 feet 6 inches below the present surface ; which series of strata had been already partially ascertained, by the sinking of six pits in various places on the site of the old Exchange.

About the beginning of April, 1841, the workmen began to destroy the foundations of the western wall of the merchants' area of the old Exchange ; and it was then discovered that the wall had been erected partly on some small but interesting remains of a Roman building, which was evidently still standing *in situ*, those remains apparently resting upon the native gravel. The Roman work consisted of a piece of a wall with a kind of pedestal, built across the ground obliquely from the south-west to the north-east ; the pedestal being covered with stucco and moulded, and painted in colours in distemper, representing a guilloche or volute, in yellow upon a red ground. A representation of this fragment is inserted in the Plan prefixed to the present volume. The interior of the ancient work consisted of rough plaster, containing fragments of old roof-tiles and small pebble stones bedded in the cement. Some of the large Roman bricks were also found, measuring $17\frac{1}{4}$ inches by $11\frac{1}{4}$, and an inch and three quarters in thickness ; and specimens of all these remains, with a variety of pieces of marble and turkey-stone from the late Exchange, have been preserved in the Corporation Museum at Guildhall. The rude and fragile nature of the Roman work has occasioned the destruction of the principal

part of the painting; but one piece of the pedestal has been preserved, which still exhibits a small portion of the original surface above the lowest mouldings, perfectly retaining the yellow-ochre colour so generally to be found in Roman buildings. On this surface, a short distance above the moulding, are drawn two narrow horizontal lines of black and white; and the remaining interval down to the base appears to have been filled up with red or purple, now completely faded, and to be distinguished only by very close observation. Another large fragment of a base is altogether rough and without ornament; and it evidently belonged to some other part of the structure, being quite different in the mouldings and proportions.

At the part where these small remains of Roman work ceased to afford a support for the walls of the Exchange, oak piles had been driven down, and sleepers laid upon the heads of those piles; the soil beneath these piles consisting of an older rubble wall and foundations, 3 feet 2 inches in depth, and a layer of concrete of 1 foot 2 inches. It was then discovered that the whole of this ancient work had been founded on a very large pit or pond, sunken 13 feet lower, through the gravel quite down to the clay. The pit was irregular in shape, but it measured about 50 feet from north to south and 34 from east to west, and was filled with hardened mud, in which were contained considerable quantities of animal and vegetable remains, apparently the discarded refuse of the inhabitants of the vicinity. In the same depository were also found very numerous fragments of the red Roman pottery, usually called Samian ware, pieces of glass vessels, broken terra-cotta lamps, parts of amphoræ, mortaria, and other articles made of earth, and all the rubbish which might naturally become accumulated in a pond in the course of years. In this mass likewise occurred a number of Imperial Roman coins, several bronze and iron styles, parts of writing-tablets, a bather's strigil, a

large quantity of caliga-soles, sandals, and remains of leather, and all of the more ancient articles described in the ensuing pages. The situation of the ancient gravel-pit, with respect to both the late and present buildings of the Royal Exchange, and also the order of the several series of soil deposited therein, under which these antiquities were discovered, are all distinctly represented in the Plan prefixed to this volume.

It is extremely difficult to offer any probable conjecture for satisfactorily explaining the peculiar circumstances of the contents of this gravel-pit, with the soil and superstructure by which it was covered. At the time when the gravel was taken out, it is possible that the pit was at the extremity of London, or even out of it, as the tan-pits discovered in Bartholomew lane seem to indicate; and that when the excavation was exhausted, it remained for, probably, a very considerable period of years as a dirty pond, which received the refuse of all the vicinity. In this manner it gradually became filled up; and, at the time of building the Roman wall above it, the accumulation was again firm enough to receive a bed of gravel, slightly concreted, laid on the top of the mud, so as to admit of the mass being covered up as nearly solid ground. The builders of the late Exchange, however, had found out its insecurity, and accordingly supported their work on piles, which had evidently yielded.

If Dr. Woodward's principle of determining the nature of a destroyed Roman building from the antiquities found on its site could be generally relied on, it is possible that a plausible conjecture might be offered concerning the edifices which once stood over this gravel-pit. In taking a general view of the collection, the most numerous articles are the necks of amphoræ of every variety; broken bowls and pateræ of Samian ware, both plain and figured, and of all sizes; fragments of mortaria of different degrees of strength; and the

remains of leather, some still retaining the forms of various ancient coverings for the feet, and others either unmanufactured or having no longer any trace of an artificial shape. The rest of the recovered antiquities consist of a comparatively small quantity of ordinary household and mechanical instruments, and an inconsiderable number of common coins of low value. All these articles appear to have been broken, old, or even worn-out, before they were thrown into the forgotten receptacle in which they were found; and hence their indubitable genuineness is the first impression conveyed by them. Regarded collectively, the remains certainly indicate that the buildings to which they belonged must have been of a civil and domestic character; and some of them, most probably, inferior shops. If one of these had been a *Taberna sutrina*, or shop of a shoemaker, the quantity of worn-out soles and shapeless pieces of apparently unwrought leather would be naturally and easily accounted for; though it cannot be denied that the pond or pit might naturally supply such refuse without having recourse to this supposition. The many necks of amphoræ and fragments of Samian-ware dishes and drinking bowls might also lead to the conclusion that another of the buildings was a *Taberna diversoria*, or inn; or possibly a *Caupona*, or shop where wine and provisions ready dressed were sold; with which conjecture the remains of so many mortaria, regarding them as culinary vessels, are in perfect accordance. Another article in the collection, the Strigil, described on page 34 of the following catalogue, has unquestionably belonged to a Bath, with, perhaps, the handle of the amphora, stamped with the remarkable inscription noticed at page 5. It is possible also that part of the apparatus of a bath may still exist in some of those necks of large earthen vessels which have the mouths contracted in the centre, being intended to admit only a series of drops or

a very small stream to issue from them, and for that reason bearing the name of *guttus*. Such vessels were kept in baths for containing oil to be dropped upon the edge of the rough metal strigil, for the softening of its action in removing the perspiration from the body of the bather. The *guttus* of the baths is often represented as no more than a very small ampulla or phial, but it is quite probable that the Romans, who commonly took with them their own bottles of oil for anointing after bathing, also provided their own strigils and other apparatus; and that at the public baths the oil for lubricating the strigils was kept in larger vessels, especially in so rude a settlement as Roman London. The amphoræ having mouths partially closed may, however, have been intended for the vessels from which water, both warm and cold, was poured over the heads of the bathers. In concluding these conjectures, it may be observed that a bath might be purposely erected near a house of public entertainment, or might even be connected with it.

The only means of arriving at any approximation as to a date when these remains were covered over in the gravel-pit must be deduced from the Roman coins which were found with them, and of which a particular account is given hereafter, from page 59. Those of Vespasian and Domitian are the most numerous, especially the latter; but though there are specimens of the coins of Nerva, Trajan, Hadrian, Antoninus Pius, and Marcus Aurelius, and also of the two Emperresses Faustina, there do not occur any pieces of the emperors of the third century, excepting one of the third brass of Septimius Severus, which has been plated. There does not appear to be any reason for doubting that this coin was really "found in the gravel-pit, from 20 to 30 feet in depth," as the original title states, with three other pieces of Vespasian and Domitian; and if this be regarded as the latest coin enclosed

there, that receptacle was of course covered over before A.D. 235. There is, however, a small coin of Gratianus capable of being positively assigned to A.D. 374, which was recovered after having been taken away, and consequently bearing a less particular title,—which probably more accurately indicates the time when the gravel-pit was closed up and built upon, namely, about sixty-five years before the departure of the Romans from Britain. This conjecture will perhaps appear the more probable when the decorative character of the Roman remains already described is considered. The painted fragment discovered might almost naturally lead to the conclusion that, as Roman luxury had then penetrated into Londinium Augusta, and as the city had become extended, the former *Taberna* was found to be too inferior for the inhabitants; and possibly, the ground on that spot too valuable for the empty gravel-pit or pond to be left unoccupied any longer. A new house of entertainment, perhaps a *Thermopolium*, for the sale of hot liquors, arose on the same site; and as such buildings are known to have been frequently ornamented with painting, the lively character of the decorations discovered presents nothing conclusive against such a conjecture. It may not be even quite unreasonable to suppose that the modern concentration of taverns round the Royal Exchange is only the continuation of a practice of remote antiquity.

With these observations is terminated an attempt to illustrate a series of antiquities, full of interest at the present time as being the types of places and manners long since departed. Neither in the preceding Introduction, nor yet in the ensuing descriptive Catalogue, is there any pretence intended as to novelty of elucidation or extent of reading or research; for the absorbing professional occupations of the Author would

effectually prevent his entertaining any such design, even if he considered himself capable of executing it. All that has been attempted, therefore, is to supply the visitors of the Museum of the Corporation of London with so much archæological information concerning the Antiquities discovered at the New Royal Exchange as may lead them to find some interest and gratification in even such mutilated remains as those which are here described.

It has been also attempted in this sketch to show that the citizens of London have never been unmindful of their ancient civic remains ; and even in times when such memorials were held in little estimation, and the nation had no national museum, they possessed in Gresham College not only such a receptacle, but apparently a niche for local antiquities. The liberal willingness with which every suggestion has been met, with reference to the preservation of these reliques, also shows the inconsiderate injustice of those gross attacks on the Corporation and its officers in this respect, which are so constantly made, and which it is impossible to reconcile either to candour or to truth.

In conclusion, the writer is bound to acknowledge his very great obligations to his esteemed friend, R. Thomson, esq., one of the Librarians of the London Institution. On him has fallen the labour of arranging, classifying, and illustrating these Antiquities, and without him it could not have been done at all. The Library Committee of the City of London were good enough to allow him to be associated with the Author in this work ; and it is with the most grateful sense of his exertions and labours that this acknowledgement is now recorded.

WILLIAM TITE.

17, *St. Helen's Place*,
20th May, 1848.

DESCRIPTION OF THE ENGRAVED PLAN OF THE NEW ROYAL
EXCHANGE.

THE annexed Plan was added to the ensuing Catalogue, principally with the view of pointing out the exact site of the excavation in which the most important antiquities were found. In the Plan are exhibited the buildings of the New Royal Exchange, with the important improvements made in its vicinity. The strong black outline indicates the situation and extent of the old Exchange, as rebuilt after the Fire of London in 1666; and the oval shaded spot at the north-west corner shows the situation and extent of the gravel-pit. The rectangular lighter space, drawn obliquely across the pit, represents the position of the Roman wall discovered within it, containing the fragment of the painted architectural base noticed in the preceding Introduction.

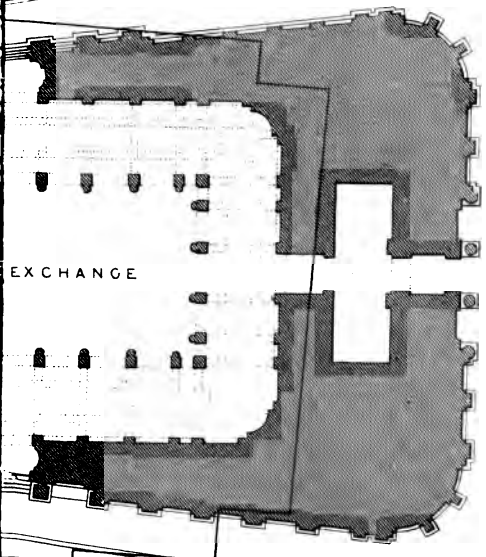
A vignette at the lower part of the Plan gives a section of the gravel-pit, with a sketch of the base as found *in situ*, though somewhat restored in the detail of the ornament painted upon it. The section shows that the foundations of the walls of the late Royal Exchange were based, at a level of 16 feet below the present roadway, on piles driven down for a considerable depth into the muddy accumulations of the gravel-pit. The oak plank represented on the heads of these piles was 6 inches in thickness, and beneath it were the Roman rubble-work and base, measuring (including the planking) 2 feet 2 inches. Then succeeded Roman rubble foundations 1 foot in thickness; and then Roman concrete, 1 foot 2 inches in depth, which rested on the top of the mud. The natural gravel or bottom of the pit was on the average 13 feet below this point; and the entire depth to the bottom, from the present surface to the ground, was no less than 33 feet 4 inches. Most of the more valuable of the ancient remains were found at that very considerable depth.



BARTHOLOMEW LANE

THREADNEEDLE STREET

BURIAL GROUND



EXCHANGE

EXCHANGE BUILDINGS

I L L

CHANGE ALLEY

100

200 Feet

F Bedford Luho



ANTIQUITIES

DISCOVERED IN EXCAVATING FOR THE FOUNDATIONS OF

The New Royal Exchange,

1841.

FOR the more clear and orderly consideration of the great variety of articles included in this Catalogue, they are described according to the several great classes into which they naturally fall, which consist of the following subjects :

I. POTTERY and GLASS.

1. Moulded Utensils and Articles : *Bricks and Tiles.*
2. Vessels of Matted Pottery : *Jars, Urns, Vases, Amphoræ, etc.*
3. Terra-cotta Lamps.
4. Samian Ware.
5. Potters' Marks.
6. Glass.

II. WRITING-MATERIALS.

1. Tablets.
2. Styles : *Iron Styles, Brass Styles, Bone and Wooden Styles.*

III. MISCELLANEOUS ANTIQUITIES.

1. Fragments of Armour and Dress : Instruments of Arts and articles of domestic use.
2. Tools of Artificers.
3. Remains of Leather Manufacture.

IV. COINS.

V. HORNS, SHELLS, BONES, and VEGETABLE REMAINS.

VI. ANTIQUITIES and ARTICLES OF LATER PERIODS.

In describing the individual specimens which are contained under these principal heads, the present Catalogue exhibits, firstly, an abstract of the *original tickets* attached to most of the separate articles of the collection; which tickets were written at the time these antiquities were discovered, and record the date and place of their disinterment and the names of the persons by whom they were found. Descriptive notices are then added to each article, which are distinguished as original by brackets []; and the same marks are attached also to those titles which were first drawn up for this Catalogue, the subjects having been received without any descriptions.

With respect to the serial order of the several specimens, the most perfect antiquities are placed first, and each one is further distinguished by a Figure in red affixed to the article itself, having a corresponding Number inserted in the Catalogue, by which every individual piece described may be immediately referred to and identified.

I. POTTERY AND GLASS.

1. MOULDED UTENSILS AND ARTICLES.

IN the methodical classification of ancient and modern Pottery published by M. Alexandre Brongniart* the First principal division consists of vessels of soft paste, formed out of sandy calcariferous clay, capable of being streaked by an iron instrument, and for the most part fusible in a porcelain-furnace. The First Order in this class comprises such articles as are made from sandy lime, with either a matted surface or without any glazing; and the Second Sub-order included therein relates to several of the specimens of ancient pottery preserved in this collection; namely, MOULDED UTENSILS, or materials for a variety of works, as bricks, tiles of different kinds, conduit-pipes, etc., of which the following are examples.

* *Traité des Arts Céramiques, ou des Poteries, considérées dans leur histoire, leur pratique, et leur théorie*: Paris, 1844, 8vo, 2 tomes, avec un Atlas; tome i. p. 300. *Description méthodique du Musée Céramique de la Manufacture Royale de Porcelaine de Sèvres*, par MM. A. Brongniart et D. Riocreux: Paris, 1845, 4to, 2 tomes.

No. 1. [The greater part of a large flat Roman Tile of light-red brick-earth, measuring 13 inches by $15\frac{1}{4}$ inches to the longest extremity remaining. The sides are turned up at right angles to the height of $1\frac{1}{4}$ inch, and the material is about $\frac{3}{4}$ of an inch in thickness. At the more perfect end, where the tile was joined horizontally to the next in order, appears nearly one half of a large circular stamp; which, however, is so faintly impressed as to show nothing more than a series of concentric circles. The shape and nature of the tile appear to indicate that it was intended for part of a rectangular channel for conveying heat into a bath. There are also some other pieces of similar tiles in the collection, greatly mutilated.]

Nos. 2, 3. [Two specimens of Roman Ridge-Tiles of light-red brick-earth, the more perfect of which measures $15\frac{1}{2}$ inches in length, and is bent into an elliptical arc of about 8 inches, which has fallen and become distorted in the drying or burning. The thickness of the tiles is about $\frac{7}{8}$ of an inch. There are also some other fragments of similar tiles in the collection.]

No. 4. [A square Tile of unbaked clay, measuring $6\frac{1}{2}$ inches, and $1\frac{1}{2}$ inch in thickness, which has become exfoliated throughout its whole substance, and continues to separate into large flakes or scales.]

No. 5. [A large Brick of light-red earth, measuring 11 inches by $5\frac{1}{2}$ inches, and $2\frac{3}{8}$ inches in thickness ; perfectly plain, without any mark or stamp.]

No. 6. [Part of a bent Pipe, of light baked clay, of an unequal cylindrical form, somewhat like the neck of a retort, measuring 7 inches in length, and 3 inches in diameter at the larger end and 2 inches at the smaller. It possibly formed part of a conduit-pipe.]

2. VESSELS OF MATTED POTTERY.

The Third Sub-order of the First Order, in the First principal division of M. Brongniart's classification, comprises MATTED POTTERY ; namely, Jars, Urns, Vases, Amphoræ, *etc.*, formed on the turning-wheel, and frequently finished by the lathe, specimens of which are described in the ensuing articles.

No. 1. Large Wine-pot. Found at the south-east corner of the old Royal Exchange, 17 feet deep, December 3d, 1840.

[About two thirds of the lower part of an *Amphora*, with the foot entire, of pale baked clay, measuring 2 feet 1 inch in height

and $11\frac{1}{2}$ inches in diameter at the fractured part. A large Neck, with the handles, possibly belonging to the same vessel, not stamped with any maker's name, is deposited within the amphora.]

No. 2. [The Neck, and part of the right Handle, of an *Amphora*, noticed in this order on account of a large well-defined and remarkable stamp, impressed on the upper part of the handle longitudinally from the neck, consisting of the contracted words EVALERTROPH, in which there occur three compound letters or ligatures. The words were probably intended for *Eualere trophin*, or *tropin*; literally meaning that the vase was designed for holding that weak wine, or dregs, called *Tropis*, which was kept in baths for an emetic or a sweat. This liquor is mentioned by Martial* in a difficult passage, but evidently bearing the present signification, the entire epigram having reference to the practices of the baths. As several other articles connected with baths occur in this collection, the interpretation here given may perhaps be regarded as the more probable. On one side of the neck a cross has been scored in the clay whilst it remained moist.]

[* Lib. xii. Epig. 83.

“Fumosæ feret ille *tropin* de facie lagenæ,
Frontis et humorem colliget usque tuxæ.”]

No. 3. [A *Mortarium*, nearly entire, measuring $16\frac{3}{4}$ inches in diameter, with a spout of $1\frac{1}{4}$ inch, and 5 inches in depth. It is surrounded by a channelled rim or margin of $2\frac{1}{4}$ inches, on which, on the right of the spout, is a large stamp, bearing the inscription CRACIVS F between two lines of leaves. The material of which this vessel is made is pale baked clay, and it bears evident marks of the lathe within the basin.]

Nos. 4, 5. [The remains of two smaller *Mortaria* of pale baked clay, without any makers' names; one of which appears to exhibit the small stones with which the clay of such vessels is said to have been mixed, to assist in trituration.]

No. 6. [A small light *Mortarium* of pale baked clay, nearly perfect, but without the maker's name. It measures 11 inches in diameter to the extremities of the margin, which is $2\frac{1}{2}$ inches in breadth, and very much bent over. The bowl is smooth within, and is about 3 inches deep.]

Nos. 7–11. [Five fragments of the margins of *Mortaria* of pale baked clay, selected as exhibiting the stamps of the respective makers, which are, however, almost illegible.]

Nos. 12, 12*, 12**. [Fragments of three other *Mortaria* of stone, of exceedingly strong and heavy manufacture, which were probably employed for the trituration of corn: the remaining feet indicate the strength and solidity with which they were designed to stand. The first two of these specimens are rough within, but the interior of the bowl of the third is smooth, and appears to have been polished.]

No. 13. [A small Urn (*Urnulla*) of coarse white baked clay, gracefully formed, nearly entire, and decorated with a considerable number of small punctures made with a sharp instrument in the outside of the vessel whilst the paste was moist. It measures 6 inches across the top and 4 inches in height, including the foot; and the form is that of a Gaulish vase mounted on a stand.]

No. 14. [Another perfect but smaller vessel, of the same ware as the preceding.]

No. 15. [A small broad Vase (*Vasculum*) of coarse and dark baked clay, of the cinerary urn form, or swelling out in the body. It is perfect, and measures $6\frac{3}{4}$ inches at the mouth and 6 inches in height.]

No. 16. [A small Cup (*Pocillum*) of close and pale-red baked clay, $1\frac{3}{4}$ inch in height, and 5 inches in width across the top, including the flat margin round the edge.]

No. 17. [Specimen of an *Ollula* or pipkin, with a handle, to the extremity of which it measures about 7 inches, by 3 inches in height. It is made of fine and pale baked clay.]

Nos. 18, 18*. [Two other specimens of *Ollulae*, of coarser and thicker ware; the first measuring 5 inches in height and diameter, and the second 4 inches. They have been both apparently employed for setting on a fire; and the former has the remains of a coarse green glazing within, and is furnished with three stout feet.]

No. 19. [A deep Cup, or *Narthecium*, of a fine and full-coloured matted clay, covered with a thin yellow glaze in the inside, as having been intended to contain ointment or some unctuous preparation. It measures 3 inches in height by $4\frac{1}{4}$ inches across the top.]

No. 20. A small vessel for holding unguents. Found in large gravel pit, 32 feet deep from level of street, May 1st, 1841. Used for an ointment called *Ceroma*, and employed by wrestlers, composed of wax and earth: “*Et ceromatico fert niceteria collo**.”

[A very small earthen vessel of dark baked clay, much mutilated, but originally standing about two inches in height, with a large body and narrow neck; the mouth probably measured about an inch in diameter.]

[* *Juven. Sat. iii. 68.*]

No. 21. [A small broken Vase of pale baked clay, standing about $4\frac{1}{4}$ inches in height; having a broad body about 3 inches in width and a short narrow neck, with the clay spread out into a wide mouth above, which was perhaps originally about 3 inches in diameter. From the small size of this vessel, and the capacity of its formation around the neck, it may be regarded as having been intended to receive, and to pour out, such perfumes or unguents as would not be absorbed by the porous clay of which it is made. The foot of the vase is broad

and firm, and was very gracefully plaited or indented in the clay whilst it was moist.]

Nos. 22, 23. [Two Necks of *Amphoræ*, selected to exhibit the peculiar form of the vessels called *Guttus* and *Gutturnium*, which were used at sacrifices and festivals by supplying water in small quantities, as it were in *guttæ* or drops; but they were also employed for wine, oil, and perfumes. The small size of the mouth was the common characteristic of the *Guttus* class of vessels; but one sort was formed by pressing together, in the middle, the clay which made the top, whilst it was moist, thus shaping it into a small spout in front, with a wider opening behind for receiving the liquor; and these lips were sometimes united by an additional piece of clay, in the manner of a seal. There are examples of both kinds in the present collection.]

No. 24. [The lower part of a large spiral Cruet or *Lecythus*, of baked clay, 15 inches in length and $2\frac{1}{4}$ inches wide at the upper end. It is surrounded by coarse rough circles, as if it had been formed in a rude mould, and was possibly used for holding wax; but the *Lecythi* were usually employed for containing oil, and also the pigments of painters.]

No. 24*. [Another fragment of a *Lecythus* of a plainer form.]

No. 25. [The upper part of a vessel of very coarse and friable red-brown earth, greatly resembling a modern pitcher, but having the spout formed of a short cylinder. The handle is coarsely set on, and the shoulder of the vessel is ornamented with a rudely stamped or punctured border of squares and zigzag lines twice repeated. From the coarse earth of which this vessel was formed, the imperfect baking and fragility of the ware, and the pattern traced upon it, the present specimen may perhaps be regarded as part of a British vase. When complete it probably measured about 7 inches in diameter at the widest part, and the mouth is $4\frac{1}{2}$ inches across.]

No. 26. [A *Lagena*, or vessel of the pitcher form, of light red-brown earth, covered with a very slight glazing, having a short neck and a handle. It stands about 11 inches in height, and measures $4\frac{1}{2}$ inches in diameter at the mouth, nearly 6 inches across the foot, and about 8 inches at the greatest breadth. It is coarsely ornamented round the lower part of the body, for about half the height of the vessel, with several winding lines of white clay, about half an inch in breadth, at the distance of $1\frac{1}{2}$ inch apart, rudely laid on, and subsequently stained with a yellow colour by the glazing laid over the whole vessel. Though far from perfect, this specimen is still extremely interesting, and completely exhibits the entire form of the *Lagena*.]

No. 26*. [The remains of the lower part of another *Lagena*, of pale-brown clay.]

No. 27. [An earthen *Ampulla*, or bottle, measuring 7 inches in height and about $6\frac{1}{2}$ inches at the broadest part, having two handles, set on like those of a jar, at each side of the neck, which is very short, and $1\frac{1}{2}$ inch in diameter at the mouth. The foot measures $3\frac{1}{2}$ inches across; and the material of which the vessel is made is coarse and friable red-brown earth, covered with a very slight glazing.]

No. 28. [A large fragment of the neck of a capacious Gaulish Vase of dark-brown ware, covered with an exceedingly thin glaze resembling black lead. The fragment exhibits the marks of the lathe; and between two circles turned round the shoulder it is rudely ornamented with diagonal lines, slightly scored on the surface in groups of six strokes in each.]

No. 29. [A small fragment of dark-gray matted pottery, evidently part of a small Gaulish Vase, thin and well baked, but not glazed. It appears to have belonged to the neck of the vessel, since it contains part of two circular lines turned, with small raised points between them, and beneath are two groups of points of about sixty in each, produced by a mould.]

No. 30. [Three fragments of Gaulish ware, one of which is covered with the thin lead-like glaze of the preceding article. The other two specimens are of thick black ware, and originally formed parts of the mouth of a large broad urn, and of the flat border or lip of a cup.]

No. 31. [Two pieces of remarkably thin and delicate Gaulish ware, of light brown clay, formerly portions of two small broad vases. They are rudely ornamented on the exterior with irregular flutings and marks, very sharply executed, and produced by drawing a narrow loop of wire or metal down the sides of the vessel whilst the paste was moist and soft. Such an instrument is still employed by sculptors in modelling, and is usually called "the wire-tool."]

3. TERRA-COTTA LAMPS.

No. 1. Roman Lamp. Found, bottom of old cesspool or pit, north-east angle of Royal Exchange. This lamp is the only one discovered which has not originally had a handle; the top was broken by the pickaxe in excavating. It has the head of an empress, indicated by the crescent, representing the moon.

[A lamp of fine pale-brown clay, nearly perfect, and measuring 3 inches in width exclusive of the burner, and 1 inch in height. The head is contained in a circle in the centre, impressed in relief. It is a full-faced bust; and, as the portraits of empresses exhibited on the Roman coins, in connexion with crescents, are always in profile, the lamp may perhaps be equally well regarded as belonging to the class of lights which were used at religious festivals, and to have been intended for the feast of Diana. The figure is forcibly, though somewhat grotesquely, executed in a late style of Roman art; and the face has also that wild aspect which was frequently given to divinities. At the distance of nearly two inches from the head is a circle of an olive wreath impressed into the clay.]

No. 2. Roman Lamp. Found in large gravel-pit, 30 feet from surface.

[A small plain lamp of dark clay, having a metallic appearance, like the remains of gilding, on the surface, effected by the decomposed animal matter contained in the pit where it was found: it measures $3\frac{1}{4}$ inches in diameter exclusive of the burner, which is double and quite perfect, but the handle is wanting.]

No. 3. Lamp. Found in bottom of large gravel-pit, 30 feet from level of street, April 23d.

[A plain lamp of dark-coloured earth; the handle gone.]

No. 4. Fragment of a Lamp. Found in large gravel-pit, 30 feet from surface, March 27th, 1841.

[The upper half only of a plain lamp, of light-coloured clay, but having the handle perfect.]

No. 5. Lamp. Found in the screened dirt excavated from large gravel-pit hole, north-east angle of Royal Exchange, May 4th, 1841.

[A small and plain but very perfect lamp of light-coloured clay, standing 1 inch in height, and measuring 2 inches in diameter, exclusive of the burner. From the decomposed animal matter contained in the pit whence these antiquities were taken, there is a metallic appearance on the surface of this lamp somewhat like the remains of gilding.]

No. 6. Fragment of a Lamp. Found under the foundation of wall crossing the gravel-pit hole, April 7th.

[Half of a plain lamp of red-brown earth, comprising the handle.]

No. 7. Fragment of a Lamp. Found on south side of the large gravel-pit, 30 feet from surface, March 18th, 1841.

[The remains of a lamp of red-brown earth, consisting of the end having the burner.]

No. 8. Part of a Roman Lamp. Found at the bottom of large gravel-pit hole, April 20th, 1841, 30 feet deep.

[Part of the bottom of a small lamp of light-brown earth, having the name EVCARIS within three circles embossed on the outside.]

No. 9. Fragment of a Roman Lamp. Found in the rubbish carted away from large gravel-pit hole, by carman shooting the same ; with sundry earthen-ware ; March 23d.

[Part of the bottom of a very small lamp of dark earth, having the remains of three circles embossed on the outside, with the letters ALLIV.]

No. 10. Part of a Roman Lamp. Found west side of large gravel-pit hole, 25 feet deep ; with leather sandal, two soles, and thirteen pieces of earthen-ware, figured, *etc.*, April 14th, 1841.

[Part of the upper surface only of a plain lamp of dark-coloured earth.]

No. 11. Fragment of a Lamp. Found in the hole in centre, 20 feet down, April 2d, 1841.

[Of red-brown earth : part of the burner only.]

No. 12. Fragment of a Lamp. Found in large gravel-pit, 30 feet from surface, April 26th, 1841.

[Half of the upper surface of a lamp of light-brown earth, broken longitudinally ; the handle and burner both mutilated.]

4. SAMIAN WARE.

The Second Order of the First Class of M. Brongniart is appropriated to SHINING POTTERY, or that which has a thin glazing of silica rendered fusible by the introduction of an alkali, either potash or soda, and coloured by a metallic oxide, which formed a part of the primitive paste. He observes that this was the only glazing with which the ancients were acquainted, but that it is now no longer employed, the exact method of making it being lost*. Under this division is comprised a considerable part of the present collection, namely, the numerous reliques of vessels of that fine thin red pottery usually regarded as the ancient SAMIAN WARE. An account of the principal and most entire specimens is contained in the ensuing list; but not one of the whole series is perfect, and the greater part consists of small pieces only, which are perhaps now incapable of being matched.

* *Traité des Arts Céramiques*, tome i. p. 545.

No. 1. Drinking-bowl, of red Samian ware, discovered in fragments in cesspool, 23 feet below surface, centre of merchants' area.

[The fragments of this vessel have been carefully united, so that it is now nearly perfect. It measures $6\frac{1}{2}$ inches in diameter and 3 inches in depth; and hence may be regarded as containing the quantity of a *sextarius*, or about a pint and a half. The upper edge is ornamented with a broad border of ivy leaves.]

No. 2. [Part of a large Drinking-vessel, consisting of several fragments carefully united, showing the original measurement to have been 9 inches in the diameter and 4 inches in the depth. It was capable, therefore, of holding the quantity of about half a *congius*, that is, three *sextarii*, or $4\frac{1}{2}$ pints. Round the sides is a deep border of festoons, ivy, and other leaves, with circles

enclosing dancing Bacchantes, carrying torches and looking behind them; and it was originally supported by two strong handles, one of which remains, rudely set on close to the body and at the top of the vessel.]

Nos. 3, 4. [Remains of two very graceful small Drinking-cups, or *Cyathi*, of thick and fine ware, having the edges turned over like a flower, and embossed with long pointed leaves, with their stalks attached, lying all round on the upper surface of the edge. M. Brongniart states that these leaves were stuck on the cup with a viscous liquid called *Barbotine*, with a spatula shaped like a spoon, they having been also formed out of a thick jelly of the same. He adds, further, that the ornament is altogether peculiar to Roman pottery, and denominates the vessels cups modelled "*en Barbotine*," in which class, however, is found a variety of leaves, flowers, and figures*. The larger of the present specimens is 2 inches in height and 5 inches in diameter, and the smaller $1\frac{1}{2}$ inch in height and $3\frac{1}{2}$ inches in diameter. There are also a considerable number of small fragments of *Barbotine* vessels in this collection, showing a great variety of the pointed leaves set upon the borders, and exhibiting some difference in the ware of which they were made, as to the intensity of the red colour, and lustre on the surface. These remains show that such vessels were made of almost every size and figure, from a large patera six inches in diameter, with broad flat margins, to the smallest cup with rounded edges, not measuring more than an inch across.]

[* *Traité des Arts Céramiques*, tome i. p. 425.]

No. 5. A small Cup, found on the west side of the merchants' area, 25 feet from the surface.

[This cup is composed of fine thin Samian ware, perfectly plain, with the exception of some simple mouldings. It is very nearly perfect, and it measures $1\frac{1}{2}$ inch in height and $3\frac{1}{2}$ inches in diameter. In the bottom of the centre, inside, is stamped OIM (*Officinâ Im*)]

No. 6. [The interior bottom of a *Patera*, 5½ inches in diameter, stamped in the centre with IVNAL, probably for *Juvenalis*. The name of Ioenalis, for Jovenalis, has been found on pottery discovered in London. There is a fragment of another vessel of plain Samian ware which contains the termination of this stamp, impressed with great care and clearness.]

No. 7. [Several less perfect and smaller fragments of vessels of figured Samian ware, selected for the purpose of exhibiting the different types and subjects usually embossed on them, by means of the engraved rolls and single stamps employed by potters, both separately and combined.

Men catching deer, with a border of birds beneath.

Deer chased by lions. Another border containing lions.

A hunt of wild boars.

Stags couching in a forest.

A chase of hares and rabbits by dogs.

Circles enclosing winged boys.

Remains of a border with whole-length human figures.

A border formed of festoons and short darts.

Lions, with boys at play in circles.

Circles with animals, apparently bears.

Gladiators, and men hunting or fighting with lions.

Boars, with circles enclosing birds of prey.

Hares running, with tufts of grass or fern placed alternately.

Birds of prey in circles, placed alternately with hares running.

[One of these latter specimens is remarkable, as exhibiting the leaden rivet anciently employed for mending the vessel, showing the estimation in which the figured Samian ware was formerly held.]

No. 8. [A large cup of plain Samian ware, with conical sides, 5½ inches in diameter and 4 inches in height, stamped in the centre of the bottom within, OF CARI (*Officinâ Carî*), from the workshop of Carus, in reversed letters.]

5. POTTERS' MARKS.

A large quantity of the Samian ware of this collection consists of small broken fragments, incapable of being united, and neither sufficiently perfect nor interesting to be exhibited, excepting as pieces bearing the names of the potters by whom they were made. Out of the whole mass, therefore, amounting to several thousands of fragments, a considerable number of the stamped parts of vessels has been selected, from which the ensuing List of Potters' Names has been compiled. It contains many which have not before been published in any other series; and hence may assist in the decyphering of obscure and imperfect stamps, for which purpose such catalogues are principally valuable. The particular kind of vessel on which the name is found is also noticed in the list here given, with the view of showing the various articles known to have been manufactured by the same potter.

In all the very numerous collections of pottery which have been discovered in Britain, and especially in London, there are certain of the same names of manufacturers which continually occur; who may hence be regarded as the most celebrated makers of the earthen-ware imported hither in such vast quantities during the Roman period. Some of these employed a variety of stamps, bearing the name engraven more or less at length, and distinguished also by several other differences; and it is only by a comparison with the methodical lists of potters' marks, which have been occasionally published, that the identity can be ascertained and the perfect inscription be recovered. A curious instance of this kind of illustration occurs with respect to a potter who now appears to have been called Crescticus, specimens of whose red ware are both beautiful and very numerous. When the great discovery of pottery was made in Lombard street in 1785*, some pieces were found marked OF CRES, which Dr. Combe conjectured to signify Crescentis;

* *Archæologia*, vol. viii. p. 131.

but since that period many vessels of this manufacture have been discovered, exhibiting a gradual increase in the letters of the name, in the several variations of CRES, CREST, CRESTI, and in the present collection is a fragment marked OF CRESTIC which does not appear in any list previously printed.

The pieces of Stamped Samian ware which have been selected from the remains found at the Royal Exchange are all distinguished by labels placed in immediate contact with the Potter's Mark, on which the letters of the name have been carefully copied, that they may be the more generally read and understood. For the same reasons, also, a few remarks, illustrative of the peculiarities usually observable in these signatures, are prefixed to the ensuing list.

The name of the potter by whom the vessel was made is generally found on the centre of the inside of the smaller articles; under the foot, or on the lip or margin, of such as are larger; on the necks and handles of amphoræ; and sometimes, though rarely, embossed with the ornamental borders on the outside of figured ware. In the smaller vessels, the letters are commonly enclosed in a short oblong compartment, rounded at each end, and impressed horizontally across the middle of the interior, having the characters almost always formed in relief. Several examples are extant, however, of the letters being impressed into the paste, and afterwards finished by an instrument; but no specimen of an incused stamp has been found in the present collection. The inscription commonly reads from left to right; but it is not unusual to meet with the s reversed, even in any part of a word; nor to find the whole name turned, by the stamp having been improperly made. Another peculiarity is the frequent occurrence of ligatures, or the union of two or more letters in one character: as NV for MV, or T-E for THE; and the connection of MA or MV in this manner, from the blunt impression of a worn-out stamp, and the partial obliteration of the inscription by the baking, will often render the names almost unintelligible. Sometimes, also, the termination of the word only remains, and sometimes only the commencement, from imperfect sealing. The names of the potters are ex-

pressed both in the nominative and genitive cases. When they appear in the former, they are followed or preceded by F, for *Fecit*; and when they are written in the latter, M is added, to indicate *Manu*, from the hand of such a manufacturer*. The contraction O, @, or OF, is also frequently employed to signify *Officinâ*, for *ex Officinâ*, from the manufactory of such a workman. The practice of the same potters using several different stamps, exhibiting all these varieties of inscriptions, has been already noticed, and instances will also be found in the following list. It remains only to be observed that the stamps or seals for marking the ware were made both of terra-cotta and of metal; M. Brongniart has published a figure of one of the former kind, which was discovered at Lezoux in Auvergne†.

The Names of the Potters which occur on the Samian ware and baked-clay vessels found on the site of the Royal Exchange are arranged in the following alphabetical list:

ACVIL...	On a small cup of red ware.
ALIVS F	On a small cup. On the terra-cotta lamp described on page 12, No. 9, appears the imperfect name ALLIV.. which is probably another mark of the same manufacturer.
AMABIVS F	On a small bowl of thin red ware, slightly glazed: the mark very sharp and clear.
AMABIVS	
ARBONIS M	On a patera.
ASSIV...	On a small patera.
BISENE...	Imperfect. On a patera. (The s reversed.)
OF CARI	On a large cup. The name CARO was found on the remains of a vessel of pale baked clay, discovered in Lombard street in 1785‡.
OF CALVI	On a patera of red ware. The mark OFCALVI is found in the list of potters' names on the vessels discovered on the site of the church of St. Michael, Crooked lane, in 1831§.

* M. Brongniart adds that M also signified *Magnariî*, from the repository or magazine of such a potter.—*Traité des Arts Céramiques*, tome i. p. 425.

† *Traité des Arts Céramiques*, tome i. p. 424; Atlas, planche xxx. fig. 9.

‡ *Archæologia*, vol. viii. p. 121, plate vi. fig. 5.

§ *Archæologia*, vol. xxiv. p. 202.

- O CILIVI On a small cup.
- CRACIVS F On a mortarium of pale baked clay, described at page 5, No. 3.
- OF CRES On a large patera of red ware. Found also in Lombard street in 1785.
- OF CRES (Reversed.) On a small bowl of thick ware.
- CREST On a large patera.
- OF CREST On a large patera.
- CRESTI (Reversed.) On a patera. The first letter not complete.
- OF CRESTIC On a large patera. Some of these six stamps, or M CRES*, are found in almost all the collections of Roman pottery discovered in London. The increasing variations in the name of the manufacturer have been already noticed.
- M CRESTO On the external ornamental border of a rich bowl of figured Samian ware, between the legs of a hare running. (See page 15, No. 7.) This remarkable inscription can be only conjecturally explained, but it might perhaps have been intended to express MARCVS CRESTICVS OPIFEX; and indicating, by the difference of the signature from the form observed in the ordinary stamps, that the execution of the border was of a higher species of skill than that which was required for manufacturing the vessels.
- EVCARIS On the bottom of a terra-cotta lamp, described on page 12, No. 8.
- FEC(it) Reversed, within a Roman tablet. On a mortarium, imperfectly stamped. Such a mark was found on a similar vessel in Lombard street in 1785†. The commencement of the same word, having the letters placed in the usual manner, appears upon the fragment of another mortarium in this collection.

* *Archæologia*, vol. xxiv. p. 202.† *Archæologia*, vol. viii. p. 130.

- OF FEVR... On a large patera of red ware, within a radiated circle.
- OF FIRM On a small cup of thick red ware. This mark resembles that described as OFIRMONS, found in 1831, on the site of St. Michael's church, Crooked lane*.
- OF HO (Reversed.) On a patera. This mark is possibly intended to signify *Officinâ Honorii*.
- OIM On a small cup. This inscription has been already noticed at page 14, No. 5.
- IVNAL On a patera. (Page 15, No. 6.) The name intended was probably *Juvenalis*, as *Ioenalis* has been found stamped on pottery discovered in London, to express *Jovenalis*. Another fragment of a patera bears a termination probably of one of these names, ...IAL.
- MAI On a large cup.
- MEMORIS IN On a large patera.
- OF MONT... On small bowls, and on a patera. As the N and T in this name consist of one character only, which might be unobserved, the mark is probably the same as that given by Dr. Combe under the form of OF MONANI, from the red ware found in Lombard street in 1785†. The last imperfect mark occurs on a patera, within a radiated centre.
- OF NI... On a small cup. This may have been either the commencement of NIGR or NIGRINI, as stamped on the vessels discovered in Lombard street and Crooked lane; or it may have been a part of the mark ensuing.
- NIVI On small cups. M. Brongniart has published a representation of an unformed piece of clay, which he supposes to have been the foot of a cup, stamped with this name. It was discovered in the remains of a pottery furnace at
- NIVI F

* *Archæologia*, vol. xxiv. p. 201.† *Archæologia*, vol. viii. p. 131.

Heiligenberg, a village near Milz in the valley of Bruch, not far from Strasburg*.

- O OMAF On a small bowl.
- OPPRIN On a large patera.
- O PASEN On a cup of coarse ware, clearly printed. This mark is probably the same as that given by Dr. Combe, from the pottery found in Lombard street, O PASE†; and it appears to have belonged to the same manufacturer as the one whose ware is stamped OF PAZZENI on some of the specimens discovered in Crooked lane‡.
- ...PATRIC On a small cup, clearly impressed. This name also occurs, without any prefix, on a large deep cup of very thick ware, and on a large patera.
- OF PONT-EI (PONTHEI) On a large patera.
- OF PRIMVLI On a small bowl. From the circumstance of OF PRIM having been found stamped on the Roman ware discovered at Reculver, and the name of *Primitivus*, a potter, being referred to by Battely in his *Antiquitates Rutupinæ*§, it was conjectured that the inscription OF PRIM, impressed on some of the fragments discovered on the site of St. Michael's Crooked lane, must also be attributed to the same potter. The words, however, may be equally well regarded as the commencement of the name given in the margin.
- OF RO... On a large patera; also reversed on a patera.
- ROI PVS F On a patera: two specimens.

* *Traité des Arts Céramiques*, planche xxx. fig. 14, tome i. p. 427.

† *Archæologia*, vol. viii. p. 131.

‡ *Archæologia*, vol. xxiv. p. 202.

§ Battely affirms that Primitivus was the name of a very celebrated potter, on the authority of the tract of Paulus Petavius, entitled *Antiquaria suppellectilis Portiuncula*, printed in the *Novus Thesaurus Antiquitatum Romanarum* of A. H. De Sallengré, Venet. 1735, fol., vol. ii.; and of Johannes Smetius, in his *Antiquitates Neomagenses*, 1678, 4to, p. 166.—*Antiquit. Rutup.* Oxon. 1745, 4to, p. 105.

..SABIANI	On a patera.
(s)ABINVS	On a patera: imperfect in the initial.
SANI V	On a patera.
OF SEVIEMI	On a large patera. [bowl.
OF SEVERI	On a small cup, a patera, and a small thick
OF SEVERI	On a patera of thick ware, within a radiated centre. Found also in Lombard street.
OF VIRILI(s)	On a small bowl. The name has been found in Crooked lane and in other places*.
OF VITA(lis)	OF VITAL(is) On a patera. This name has also been found in Crooked lane, and at the Bartlow hills.
OF VVIRII	On a patera.

The following list exhibits terminations and parts of names only, with some which are too imperfectly stamped to be decyphered.

...ARIAN	On a patera.
....ASCVLI	On a patera.
CCILVI	On a small cup.
...CEII	On a patera.
...EPON FE	On a large patera.
...IAL	On a patera. [diated centre.
...IANI FE	On a large patera of thick ware, within a ra-
....ICA...	On a mortarium.
MARINV...	On a mortarium, within a narrow indented border.
O...ERIV..	} On a mortarium, within a border of points.
GERMANVS	

* *Archæologia*, vol. xxiv. p. 201.

6. GLASS.

The specimens of Glass contained in this collection will be found, when carefully examined, to be numerous, interesting, and consisting of many varieties, though, at the same time, there is not one vessel remaining entire, nor are the fragments such as can be successfully united. With the exception of part of a title affixed to the remaining handle of a *Simpulum*, the pieces were without any such notices as those which were attached to the other antiquities, indicating the depth and particular spot where they were discovered, and suggesting a probable conjecture concerning their age. The fragments, however, are sufficiently perfect in themselves to show that they once formed part of several different species of Roman glass vessels, similar to those which are exhibited by Montfaucon in various specimens taken from the Brandenburg Museum*. Thus, some of the pieces evidently once belonged to bottles of a rectangular shape, which had usually low necks and short handles; others formed part of round flasks, with longer necks; others were like broad vases or basins, cast with thick flutes, or covered with concentric circles; and others resembled the phials of the middle ages. A few of the specimens are more clear, and have less of the usual green Roman tint, than the rest; but there are certainly not any which can be regarded as representing the rare and costly *Crystalla* or *Crystallina*, brought from Egypt. The present fragments, on the contrary, are in all probability chiefly the remains of vessels of the common Aretian manufacture, which were but little valued; or of the ordinary impure glass, which Martial places in opposition to the large and genuine crystal cups†. The most perfect specimen in the collection is of the phial kind, and is that with which the ensuing list is commenced.

* *Antiquité Explicquée*, 2de edit. tome i. p. 1, pl. lxxix.

† "Sic Aretina violant crystallina testæ."—lib. i. Epigr. 54. 6. "Aretina nimis ne spernas vasa monemus."—lib. xiv. Epigr. 98. "Turbata brevi crystallina vitro."—lib. ix. Epigr. 60. 13.

No. 1. [An *Ampulla* of semi-opaque thin glass, of a dull clouded tint, standing at present $1\frac{1}{2}$ inch in height up to the broken neck, and measuring $1\frac{1}{4}$ inch in diameter at the base. This small bottle is doubtless of considerable antiquity, and was probably a lacrymatory.]

No. 2. [The Neck of a vessel which was originally furnished with two handles. One of these is remaining, and exhibits the peculiar, though extremely simple and ancient, method of forming them, out of glass previously made into long thick strips, which were afterwards again heated, and folded and pressed against the vessel for which they were intended; the handle was then separated from the remainder of the strip at the required length. This fragment measures $3\frac{1}{2}$ inches in length to the remains of the shoulder of the vessel, and is 2 inches in diameter at the mouth. It is composed of thick green Roman glass, full of air-bubbles, indicating an imperfect degree of refining, the glass not having been made sufficiently fluid during that operation to allow of their dispersion. The specimen originally belonged to a vessel intended to contain two different kinds of liquids, since it is separated down the centre, from the very mouth, by a division of glass; and it was probably part of a *Simpulum*, a small vessel used in sacrifices, from which wine or water was let out in drops*, upon the principle of the *Guttus*, already noticed.]

* ["Quo vinum dabunt, ut minutatim funderent, à guttis Guttum adpellarunt; et quo sumebant minutatim, à sumendo *Simpulum* nominavere."—Varro, *De Lingua Latinâ*, iv. 26.]

No. 2*. [The Handle of a *Simpulum* of green Roman glass, of a slight and graceful form, with two other fragments of handles; all contained in the same division with the preceding.]

No. 3. [Eight fragments of broad vessels, of the bowl or basin shape, principally of thick semi-opaque glass, cast with thick flutes on the exterior; and on the inside of two of the pieces appear to be the circular marks of the lathe. One of

the specimens is formed of quite clear glass, of a pale green tint; and another is also of clear glass, of a very deep and rich yellow-brown colour.]

No. 4. [Two pieces of coloured glass. The former of these specimens formed part of a broad vessel of thin dark-blue glass of the colour of the Portland vase; the surface is in part decomposed, but the mouldings on the edge and round the side are still remaining perfect.

[The other fragment is part of the shoulder of a small round bottle, of pale-yellow glass; also artificially coloured, covered with cast concentric circles set very closely together.]

The remaining pieces of ancient glass may be described under the two general groups following.

No. 5. [A number of pieces of clear pale-green glass, varying in substance, part of which originally belonged to round bottles, and part to bottles of a rectangular shape. Some of the latter vessels must have been of rather a large size.]

No. 6. [Numerous fragments of bottles of semi-opaque Roman glass, also considerably varying in substance, many of which exhibit the metallic and iridescent appearance peculiar to ancient glass which has become decomposed by a lengthened interment.]

II. WRITING-MATERIALS.

1. TABLETS.

No. 1. *Tabella*, or small Tablet, for writing on. ("Cera . . . rasis infusa Tabellis*.") Found in large gravel-pit, 31 feet from surface, April 18th, 1841.

[A single complete page, measuring $5\frac{1}{2}$ inches by $4\frac{1}{2}$, having a border or margin of $\frac{3}{8}$ of an inch in breadth on every side, the reverse being quite plain, showing it to have been an outside leaf or cover. The creases made by the string, which bound it together as a book or letter†, are apparently visible on the edges at the sides: the wood is of a close grain, and smooth within the panel, probably from the plane-like action of the style over the surface, frequently repeated.]

[* Ovid. *Artis Amator.* i. 437.]

[† "*Chrysalus*. Nunc tu abi intrò, Pistoclere, ad Bacchidem, atque offer citò. *Pistoclerus*. Quid? *Chrysalus*. Stilum, ceram, et tabellas, et linum."—Plaut. *Bacchides*, iv. 4. 63; edit. Gruter. cum commentar. Taubmanni, 1621.]

No. 2. [Fragment of a Leaf of a *Tabella*, found with No. 1; measuring $6\frac{1}{2}$ inches by $2\frac{7}{8}$, with a margin as in that specimen, the reverse being plain, for the outside of the book. The crease of the string, and the holes by which it was connected with the opposite leaf, are visible on the inner edge. The wood is of rather a coarser grain than that of the first example.]

No. 3. [Fragment of an interior or double Leaf of a *Tabella*, found with No. 1; measuring $5\frac{1}{2}$ inches by $2\frac{1}{2}$, with part only of the margin left. On one side is a channel, nearly an inch broad, and cut to almost $\frac{1}{16}$ of an inch in depth, passing across the centre of the panel within the margin; and one of

the holes by which it was connected with the next leaf is visible in the remains of the inner border. The wood is of a coarse open grain.]

SEVEN FRAGMENTS OF TABELLÆ.

No. 4. [Three of these pieces probably belonged to the same leaf, and therefore they are now lightly joined together. The page when perfect measured $5\frac{1}{2}$ inches in height, and had a margin on every side, with a channel on one surface, an inch in breadth. The wood is of a very coarse grain, and the crease of the string is still visible.]

No. 5. [Another fragment, measuring $5\frac{1}{2}$ inches in height, having the upper and lower margins left; but the interior is without any channel, and the reverse is quite plain, showing the specimen to have been an outside leaf or cover. The wood is smooth, and of a finer grain than the preceding.]

Nos. 6, 7. Found in large gravel-pit hole, 30 feet deep, April 24th, 1841.

[These fragments are only parts of leaves.]

No. 8. [Another strip of an exterior leaf or cover, having the upper and lower margins remaining, and the reverse quite plain.]

2. STYLES.

IRON STYLES.

No. 1. Iron *Stylus*, or Writing-pen. Found at bottom of large gravel-pit hole, May 6th, 1841, with earthen-ware.

[A very perfect specimen of a strong well-finished style, 6 inches in length, with the erasing part square, and $\frac{3}{4}$ of an inch long, very much turned up and blunted at the edges. It has been ornamented with reeding the whole length of the shaft.]

No. 2. Two Iron *Styli*, or Writing-pens. Found in bottom of large gravel-pit hole, May 6th, 1841.

[The longer of these instruments measures $5\frac{1}{4}$ inches in length; it is much corroded, and the erasing end is broad and rectangular.

[The other style is 4 inches long, and the erasing end is only sloped off from the stem and slightly spread out. The centre is either worn by holding, or was made somewhat thinner than the extremities; and the point is long, and issues from a narrow moulding, like a modern pencil.]

No. 3. Iron *Stylus*, or Writing-pen. Found in bottom of large gravel-pit, May 5th.

[A style in good preservation, $5\frac{1}{4}$ inches long; the point issuing from a fillet or moulding, like a modern pencil, and the erasing end broad and rectangular, and much worn.]

No. 4. Iron *Stylus*, or Writing-pen. Found in large gravel-pit, 25 feet deep; also a *Festuca*, or Skewer, found at the same depth, April 15th, 1841.

[The style is 6 inches in length, and the erasing end is small and square.]

No. 5. Iron *Stylus*. Found, with a brass needle, 25 feet deep, in large gravel-pit hole, 13th April, with sundry earthenware and leather.

[A style, $5\frac{1}{4}$ inches long, much corroded, with the erasing end broad and thick.]

No. 6. Iron *Stylus*. Found with a portion of a bronze one and an acus, April 23d.

[A round style, very much corroded, the erasing end broad and rectangular.]

No. 7. Iron *Stylus*. Found April 24th, with a piece of metal called another style.

[Very much corroded and bent.]

No. 8. Iron *Stylus*, or Writing-pen. Found in large gravel-pit hole; with a brass pin and piece of brass, 30 feet deep, April 28th.

[A style with a square erasing end, and having the point blunt and apparently joined on, or mended.]

No. 9. *Stylus*, or Pen. Found on the works, April 18th, 1841.

[A fragment only, of which the erasing end is broad and rectangular.]

No. 10. *Styli*, or Pens. Found, 25 feet from surface, in large gravel-pit, west of merchants' area, April (1841).

[One specimen is a fragment of a flat style of iron, very much corroded, the writing end remaining; shaped like an arrow, with the point blunted. The other is a small iron style, nearly $4\frac{1}{4}$ inches in length, with a square erasing end; very much corroded, but quite perfect as to form.]

No. 11. *Styli*. Found in the bottom of large gravel-pit hole, 30 feet deep, 4th May, 1841.

[Two fragments of round iron styles, the erasing end of one narrow and sloped; that of the other broad, thick, and rectangular.]

BRASS STYLES.

No. 12. Brass *Stylus*, or Pen. Found in large gravel-pit hole, 25 feet from the surface, April 28th.

[A small and delicate instrument, $5\frac{1}{2}$ inches long, with the erasing end circular and slightly concaved, like a spoon, for collecting the wax from the surface of the table.]

No. 13. Brass *Styli*, or Pens. Found in excavations of large gravel-pit, 31 feet from level of street, May 1st, 1841.

[Three fragments, and one perfect style, thin, round, and well finished, $5\frac{1}{2}$ inches in length; the erasing end is round, and shaped like a spoon.]

No. 14. Two small Brass *Styli*. Found in large gravel-pit hole, April 10th, with sundry earthen-ware, leather, *etc.*

[The more perfect instrument is very delicate and thin; it is $4\frac{1}{2}$ inches long, and the erasing end is small, round, and slightly concaved.]

No. 15. Two Brass *Styli*, or Pens. Found in large gravel-pit, 30 feet below the level of the street, May 1st, 1841.

[Fragments only, the erasing ends of both instruments being wanting; the point of one style is very fine.]

No. 16. Portion of a Bronze *Stylus*. Found with acus, April 23d.

[A long and delicate round fragment, the point only remaining; discovered with the acus No. 19.]

No. 17. Three fragments of Brass *Styli*. Found with pin-case, *etc.*

[Very short pieces of metal; thin, round, and finely-pointed. As the tongues, or pins, of fibulæ are frequently mistaken for imperfect styles, it is quite possible that some of the less defined pieces of metal in this collection may also be of the same description.]

BONE AND WOODEN STYLES.

It having been found in the course of time that metal styles were easily convertible into weapons, with which scholars often seriously wounded each other, the material of which they were formed was changed by authority from bronze and iron to bone or wood*. The following articles, it has been conjectured, are specimens of the latter kind of instruments; but whether they were ever really such is very doubtful.

No. 18. Two small fragments of Wood and Bone *Styli*.

* Montfaucon, *Antiquité Expliquée*, tome iii. partie 2, p. 357. "Vertamus aream in ceram, mucroneque aremus osseo."—Q. Atta Fragm. in Sat.; *Opera Vet. Poetarum Latinorum*, edit. Maithaire; Lond. 1713, fol., vol. ii. p. 1520.

Found in large gravel-pit hole, 30 feet deep ; with two soles of sandals ; April 10th.

No. 19. Style or Bodkin. Found with iron handle and roof tile-nail, April 28th.

[A rounded piece of wood, 7 inches in length ; the point is broken, and there is not any appearance of the erasing end of a style.]

III. MISCELLANEOUS ANTIQUITIES.

1. FRAGMENTS OF ARMOUR AND DRESS: INSTRUMENTS OF ARTS AND ARTICLES OF DOMESTIC USE.

No. 1. Shoulder-locking Plate of Roman Strap-armour. Found in large hole, 30 feet deep, April 29th.

[A thin brass band, $5\frac{1}{8}$ inches in length and $1\frac{1}{8}$ inch broad, which may either have formed part of that kind of *lorica*, or cuirass, which was made of narrow strips of metal, or have been the end of the shoulder-strap connecting the breast-plate and back-plate.]

No. 2. Armour, or Harness, Studs. Found in the bottom of large gravel-pit hole, with sundry leather and earthen-ware, and two pins, March 1st, 1841.

[Three specimens formed of thin brass plates, which have been apparently bent over some interior substance and secured by the edges, the stud being fastened to the article to which it belonged by a spike of brass issuing from the centre of each. The largest stud is $1\frac{1}{4}$ inch in diameter, the others 1 inch. The only pin remaining is a thin flat strip of brass, curved and pointed at the end. It is not improbable that these pieces of metal were originally filled with leather within, and were used as *clavi*, or studs, for securing the *ligulæ*, or straps of sandals.]

No. 3. *Fibula*, or Roman Brooch, and brass Base of Column, Found in rubbish carted away from large hole in excavations, north-west side, April 24th.

[The hinge, the pin, and part of the bent front of a large and strong brass or bronze *fibula*, $2\frac{1}{4}$ inches long, and ingeniously

twisted out of the same piece of wire. The other article consists of a plinth $\frac{3}{8}$ inch square, out of which rises a cylindrical base with mouldings, the whole height being half an inch. As there is a circular hole in the top, it is probable that this piece of metal might have been once surmounted by a figure.]

No. 4. *Spatula*, or Surgeon's Plaster-spreader. Found in bottom of large gravel-pit, 25 feet from level of street, April 24th, 1841.

[Apparently of bronze, the lower end and handle only remaining perfect. The *spatula* is $1\frac{1}{8}$ inch broad at the lower end, and the handle is $3\frac{1}{2}$ inches in length, being formed of the metal only, twisted, and terminating in a ring.]

No. 5. Brass Eylet, Brass Ring, and Brass Angle-clamp for box. Found in the bottom of deep gravel-pit, March 15th.

No. 6. *Strigil*, or Bathing-scraper. Found in bottom of large gravel-pit, April 23d.

[Of bronze or other mixed metal, $10\frac{3}{4}$ inches in length; the bowl is $\frac{3}{4}$ of an inch deep and $6\frac{1}{4}$ inches long; and the handle is doubled or turned back into a loop to receive a strap. This instrument is somewhat corroded, but is still very perfect.]

No. 7. *Strigil*, or Curry-comb. Found 30 feet deep, in gravel-pit.

[Of soft wood, 3 inches broad and 6 inches long. The top is cut into a deep curve, and possibly was originally formed with a circular or oval opening for receiving the fingers; the other end is separated into nine broad teeth. The laminæ of the wood are worn away, and parted into strips or layers.]

No. 8. A small-tooth Comb. Found 25 feet deep, April 15th.

[A fragment only of a double comb of wood, the centre being very thick and the teeth sloped off on each side, of two different degrees of closeness.]

No. 9. Part of a small-tooth Comb. Found in the bottom of large gravel-pit, 25 feet from level of street, May 6th.

No. 10. Curious remnants of Brass, supposed to be a portion of a wind-instrument of Roman manufacture. Found near Roman altar.

[Four pieces, and several broken fragments, very much corroded, of a pipe, half an inch in diameter, pierced with sound-holes like a flute, the longest and most perfect piece being ornamented with rings turned round it.]

No. 11. *Auriscalpium*, or Ear-pick. Found 25 feet from surface, large gravel-pit hole, May 6th.

[Of thick brass wire, $2\frac{3}{4}$ inches in length, the handle twisted into a ring, and the other end beaten into a small round bowl.]

No. 12. Brass Pen for writing on wax. Found in bottom of large gravel-pit hole, May 6th, 30 feet deep; with sundry red earthen-ware, and leather.

[This is rather an *acus*, or a *fibula*, or probably a pin for the hair; it is $4\frac{1}{4}$ inches in length, and the head is ornamentally wrought $\frac{1}{4}$ of an inch in depth.]

No. 13. *Acicula*, or Pin. Found west of merchants' area, 25 feet deep, 18th April.

[An elegant brass pin, about 3 inches long, with a deep round fluted head.]

No. 14. *Scalpellus*, or Roman Knife: *Acus Babylonica*, or Roman Needle. Found at Royal-Exchange excavations, 30 feet deep, in large gravel-pit, April 27th, 1841.

[Both these instruments are of iron. The Knife measures $4\frac{1}{2}$ inches in the entire length, of which the blade is $2\frac{1}{2}$ inches, the remainder being a round socket for receiving a handle. The edge is straight, the back is rounded up towards the point, and the blade is uniformly about $\frac{3}{8}$ of an inch in width. The *Acus*

is a small bar of metal, about $\frac{1}{8}$ of an inch square—which now measures $6\frac{3}{4}$ inches in length, but only a part of the thin metal of the eye remains; and the other extremity is quite round and blunt. On one side of the knife, which is greatly corroded, appears the stamp H, which seems to have been originally on the side of some figure, the whole being, however, very faint and indistinct. The other instrument does not appear to have any mark.]

No. 15. *Stylus*, or Pen; Pin-case; *Acus Babylonica*, or Embroidery Needle. Found in large gravel-pit, north-west angle.

[The Needle is round, measuring $4\frac{1}{2}$ inches, and is very much corroded; but the point is well defined and the eye is perfect. The Pin-case, or rather sheath for a single instrument, is $3\frac{3}{4}$ inches in length, formed of a thin piece of brass rolled into the shape of a case, and apparently has not been secured by any fastening.]

No. 16. Sundry Needles. Found at various times, with pieces of wooden tables for writing on, and some red Samian pottery.

[Four short round needles, much bent and corroded, but two of them have the eyes perfect.]

No. 17. *Festuca*, or Skewer. Found in large gravel-pit, 25 feet deep, April 15th, 1841, with sundry earthen-ware.

[Discovered with the iron style No. 4. This instrument is round and tapering to a blunt point, and, if straight, would be 6 inches long; it is of iron, and at the larger end is $\frac{1}{8}$ inch in thickness.]

No. 18. *Acus Babylonica*. Found with the *scalpellus* No. 14, April 27th, 1841.

[A well-preserved and handsome round instrument of brass, 4 inches long, showing the groove at the point in which the thread lay, and having the thin flat head, with the eye almost perfect.]

No. 19. *Stylus*, or Pen; *Acus Babylonicæ*, or Embroidery Needles. Found 23d April, in large gravel-pit.

[Two thin iron instruments, greatly corroded, one of which is imperfect in the head, measuring $5\frac{3}{4}$ inches in length; the other measures $4\frac{1}{4}$ inches, but is entire, both in the eye and in the point. The *Stylus* referred to in this title has been already described in the list of brass styles (No. 16), and the Cup in the account of the Samian ware (No. 5).

No. 20. Brass Needle. Found with *stylus*, April 13th.

[An imperfect instrument, really made of stout iron, wanting the head, but exhibiting the remarkable pencil-point joined on to the shaft of a *stylus* rather than a needle; it measures $4\frac{1}{2}$ inches in length. The *Stylus* mentioned in this title is described at No. 5 of the list of iron styles.]

No. 21. *Acus*, or Needle. Found in bottom of large gravel-pit hole, May 1st, with sundry skewers, nails, *etc.*

[An exceedingly delicate specimen, very nearly entire, $3\frac{1}{2}$ inches in length, formed of iron.]

No. 21*. The fragment of a Pin-case.

[A thin delicate sheath of brass, bent and pressed nearly flat, about 3 inches long.]

No. 22. *Stylus* and Bobbin, and sundry pieces of earthenware. Found in the bottom of large gravel-pit hole, April 25th, 1841; with sundry leather.

[This specimen of a *Calamus textilis*, or weaving-bobbin, is made of dark wood about 6 inches in length, with a point of about $1\frac{1}{2}$ inch, and is very much bent.]

No. 23. *Subula*, or Bodkin. Found in large gravel-pit hole, 25 feet from surface, May 6th.

[A stout well-made instrument of ivory, measuring nearly 4 inches in length, but broken both at the head and at the point; about half of the eye is left remaining.]

No. 24. *Calami Textiles*, or Bobbins for Weaving. Found in large gravel-pit, 30 feet from surface, in March, April, and May, 1841.

[These instruments are ten in number, of discoloured wood, shaped somewhat like a skewer towards the extremities, but having a considerable swelling near one end. They vary in measurement from $7\frac{1}{4}$ inches to $5\frac{1}{4}$; and on the longest remains a small quantity of fibres of wool, which have become black from age and long interment, twisted around it.

[It is possible that these small sticks, as well as the similar specimen noticed at No. 22, were originally used as *Fusi* or spindles, either with the loom or with the distaff; but, perhaps, more probably with the latter, which would account for the mutilation of several of them at one end, where it is likely that they have lost much of their proper length. At the top of the *fusus* was a slit, in which was fixed the thread drawn out by the spinner from the wool upon the distaff, the weight of the spindle being designed to stretch the line downwards as it was twisted. The lower end of the spindle was fixed into a small wheel, for the purpose of keeping it turning in a steady position; the protection of which wheel probably accounts for the preservation of some of the opposite extremities of these sticks. When the spindle had descended to the ground, the thread was taken from the slit and wound round the *fusus*, and more twisted wool was inserted in the top. This operation being continually repeated, would at length split the upper extremity too widely and far down for it to be any longer available; and new slits being made in the same spindle, and becoming also worn out, would cause it ultimately to present the appearance of the mutilated ends of some of these fragments.]

No. 25. *Forceps*, or pair of Tongs. Found in bottom of large gravel-pit, 25 feet from level of street, April 24th, 1841.

[Made of stout iron wire, round in the handles and flattened from the shoulders to the points, where the metal is beaten out thin and narrow. The whole length of the instrument is $13\frac{1}{2}$ inches, of which the bow to the hinge is 3 inches, and the bow is $1\frac{1}{4}$ inch in width.]

No. 26. Bell-clapper. Found in large gravel-pit hole, 30 feet deep.

[This fragment is of iron ; it measures 6 inches in length, and appears to have been welded together in two places, but it is imperfect at the top, and is greatly corroded throughout. The hammer end of the clapper was pointed, and probably angular, when it was in a perfect state.]

No. 27. Salt-spoon. Found in bottom of centre of large hole or gravel-pit, 30 feet below level of street, May 4th.

[A bone spoon, $3\frac{3}{4}$ inches in length, having a round concave bowl nearly an inch in diameter. The extreme end of the handle is pointed.]

No. 27*. Salt-spoon. Found in large gravel-pit hole of excavations, 25 feet from surface, April 27th, 1844.

[A smaller and less perfect spoon, also of bone, $2\frac{3}{4}$ inches in length.]

No. 28. A Lead Lamp. Found at bottom of large pit, May 4th ; with sundry worn leather and bones.

[This extremely rude utensil is composed of a thick piece of lead, measuring $2\frac{1}{2}$ by 2 inches within, surrounded by a border $\frac{3}{4}$ inch in depth, set on in the coarsest manner. There is also a handle rivetted on the bottom, $1\frac{1}{2}$ inch in length, of the same material as the lamp. The whole article is very nearly perfect.]

No. 29. Brass Ferrell, or Taper-stand. Found April 20th, 1841, in large hole ; with portions of black pottery and two large nails.

[A thin piece of brass bent into a cylindrical socket, $1\frac{1}{4}$ inch long and about $\frac{1}{2}$ inch in diameter at the top. The metal is separated below into four feet, each being about $\frac{1}{2}$ inch in length.]

No. 30. [Part of the Beam of an Iron *Statara* or Steelyard-balance, exhibiting the engraved gradations for indicating the different weights.]

No. 31. *Tessera*, or Dice. Found in large hole in excavations, 28 feet deep.

[A bone cube of half an inch in measurement, the marks on which were formed by an instrument having two parallel points, one of which was fixed in the centre, and the other traced the circle round it.]

No. 32. Lead Leaf. Found in large gravel-pit hole, April 20th, 27 feet below the street.

[A broad serrated leaf, 1 inch in length, cast in thin lead, and exhibiting on one side all the ribs and fibres very delicately expressed; but the reverse appears to be quite plain.]

2. TOOLS OF ARTIFICERS.

No. 1. Roman Gouge, or tool for masonry. Found bottom of large pit, north-east angle of merchants' area, 28 feet deep, February 26th. This was bedded in the chalk-steening on the south side.

[This instrument, though somewhat corrugated, is still well preserved and defined in all the various parts of it. The extreme length is $10\frac{1}{2}$ inches, of which the blade or bowl is 4 inches; and it is about $\frac{3}{4}$ inch in thickness at the handle end, which was most probably the original termination. At this part it is $1\frac{1}{2}$ inch broad, and at the broadest part of the blade it is $1\frac{1}{2}$ inch in width. The blade forms a long narrow spoon, very strong, and gradually diminishing to a thin edge.]

No. 2. Roman Gouge. Found in excavations of the Royal Exchange, in large gravel-pit, 30 feet deep, 4th May, 1841.

[A bent and imperfect instrument, about $6\frac{3}{4}$ inches in the extreme length, having a thick spike at one end $1\frac{1}{2}$ inch in length, for insertion into a handle. Close to this part the metal is half an inch in thickness, and is then sloped off towards the blade, of which only a very small part is remaining.]

No. 3. Portion of a Saw. Found, 30 feet deep, in large gravel-pit hole, May 1st, 1841.

[A fragment, measuring $5\frac{3}{4}$ inches in length and $1\frac{1}{8}$ inch at the broadest part, whence it gradually diminishes to $1\frac{1}{8}$ inch, in an irregular line on the serrated edge, where also the teeth are extremely thin and unequal in height, though they are uniform in shape and thickness at the other.]

No. 4. Portion of an Auger. Found in large gravel-pit hole, May 1st, 1841.

[A fragment of the blade only, $4\frac{3}{8}$ inches long, and $\frac{1}{8}$ of an inch at the more perfect end.]

No. 5. Knife. Found in bottom of large gravel-pit, 30 feet from level of street, April 28th.

[A well-preserved instrument with an irregularly curved blade, pointed, and having the cutting edge on the inner side, where it is worn very thin in a hollow. The extreme length of the knife is about $8\frac{1}{2}$ inches, two of which consist of a haft, to be inserted in a handle, and the broadest part of the blade measures 1 inch. The whole of the instrument is of thin metal.]

No. 6. Knife-handle and Blade. Found in large gravel-pit hole; the handle by Joseph Shillingford, April 24th, and the blade by T. Connor, April 26th, same depth.

[Part of the Blade of a pointed knife, in exceedingly good preservation, measuring $4\frac{3}{4}$ inches in length and $\frac{3}{4}$ of an inch at the broadest part. It is of thin metal, carefully finished, but now quite black, and bears on one side the mark $\leftarrow\rightarrow$. The Handle, which is separated, is formed of two thick pieces of cast brass, soldered together after having received the shaft of the knife between them, at the upper part. It is very solid at the lower end, where it terminates in a ring. It is $3\frac{1}{2}$ inches in length by half an inch in width at the broadest part.]

No. 7. Nails. Found in large gravel-pit at different depths, from 10 to 30 feet deep, April and May, 1841.

[Thirteen specimens of large and strong square nails, with broad round heads. The largest example is 8 inches long and half an inch in thickness at the head, and the others vary from $5\frac{1}{4}$ inches to $3\frac{1}{4}$ inches.]

No. 8. Nails. Found west of merchants' area, 25 feet from surface, April 25th, with sundry earthen-ware.

[Three specimens of strong nails with broad heads, the longest of which measures 4 inches.]

No. 8*. [Twenty-four specimens of Nails and fragments of iron, of various lengths and thickness, two of which are remarkable for having exceedingly thick and solid heads of a conical or semi-globular shape.]

No. 9. Bolt-rivet. Found, 30 feet deep, in large gravel-pit hole, May, 1841.

[Of iron, in good preservation, $3\frac{1}{8}$ inches in length, the head and the rivet both remaining entire.]

No. 10. Iron Cramp. Found in large gravel-pit, 25 feet from surface, April 25th.

[Extremely strong and well preserved, measuring $3\frac{1}{8}$ inches in the stem.]

No. 11. Linch-pins. Found, 30 feet deep, in large gravel-pit hole, May 4th, 1841.

[Three specimens: two consisting of squared pieces of iron bent double, forming an eye, with the ends brought together in parallel lines; and the third made of a thick rounded piece of the same metal, diminishing towards the extremities, bent into a curve, the upper end of which is also bent into an eye. The smallest specimen is $2\frac{1}{2}$ inches in length, and has the ends open with a strong spring. The second is of much stouter substance, the two ends lie close together, and are bent and separated at the extremities, the whole length being 4 inches. The third is $4\frac{1}{4}$ inches in length, and about $\frac{1}{4}$ inch broad at the thickest part.]

No. 12. Three articles : 1. Iron Handle ; 2. *Stylus* or Pen, found in large gravel-pit. 3. T-Nail for fixing ridge roof-tiles. Found April 28th, in large hole.

[No. 1. consists of a very strong handle of a piece of rounded iron, having the centre twisted and the two ends formed into large loops like the capital letter G. It measures $4\frac{3}{4}$ inches between the extremities across the bow. The *Stylus*, No. 2, has been already described. No. 3 is a remarkably strong and well preserved clamp-nail, $3\frac{3}{4}$ inches long and nearly 2 inches across the top, of an exceedingly modern appearance.]

No. 13. *Festucæ*, or Skewers. Found in large gravel-pit, 30 feet from level of street, April 25th, 29th, and 30th, 1841.

[Nine specimens of thin, flat, and narrow metal skewers, the longest of which measures $6\frac{1}{2}$ inches in length, and the shortest perfect examples somewhat more than 2 inches.]

No. 14. *Fuscina*, or Flesh-hook. Found in large gravel-pit, 25 feet deep, April 27th.

[A strong and wide iron hook, $2\frac{1}{2}$ inches in length, which appears to have been broken at the upper end, where there was probably an eye. It greatly resembles the fish-hook of the middle ages.]

3. REMAINS OF LEATHER MANUFACTURE.

As there is acknowledged to be very considerable difficulty in distinguishing between the many different species of coverings for the feet employed by the Romans, as they are mentioned by classical authors, it is, of course, still more difficult positively to identify and to name the particular kind to which each of the fragments contained in the present collection should properly be attributed. They are, however, evidently the remains of several varieties, which may be presumed to have belonged to those different species of shoe respectively called

Solea, *Sandalium*, *Crepida*, and *Calceus*. There does not seem, however, to be any example of the *Cothurnus*, or of the boot kind; and, although some of the specimens are very ornamental, they all at present exhibit the appearance of having been made originally of black leather only, excepting in a very few instances, in which the colour may possibly have been changed by the action of the water and decomposed matter in which these fragments have lain for so many centuries. From the notices attached to most of the other articles in this collection, when they were originally discovered, it is ascertained that these remains of leather were found between the 1st of March and the commencement of May, 1841, principally on the western side of the great ancient gravel-pit, from 25 to 30 feet in depth; but there do not appear to have been any descriptive titles belonging to this portion of the antiquities disinterred on the site of the new Royal Exchange.

The most simple form of a covering for the foot is that which provides a protection for the sole only, secured by bands over the instep and round the ancles. A very remarkable passage in Aulus Gellius* not only defines this primitive sort of shoe, but also particularly notices the distinction between it and other kinds known at the period, as to the literal propriety of the terms employed to name them. Titus Castricius, an eminent teacher of rhetoric at Rome, and at the time the tutor of Aulus Gellius, censured certain senators, also his pupils, for walking the streets in their cloaks, tunics, and *soleæ*, as too careless a habit for persons of their rank. "I would rather see you," said he, "in your togas; for it must be, at the least, inconvenient for you to be thus girded up in your equestrian dresses. But if custom have made this kind of suit excusable on a holiday, yet is it not by any means decorous in you, as senators, to walk through the streets of the city in your slippers (*soleatos*); nor indeed is it a less crime in you than it was in him

* *Noctes Atticæ*, lib. xiii. c. 21.

whom Marcus Tullius reproved for it*." In reply to this censure, several persons who heard Castricius desired to know why he called those persons *soleatos* who really wore *gallicas* (slippers), and not *soleæ* (sandals). But, continues Aulus Gellius, Castricius had here spoken with purity and propriety, for that whole species of shoe by which only the bottoms of the feet are covered, leaving the rest naked, and fastened with slight thongs, they call *soleæ*, and sometimes by the Greek word *crepidulæ*.

In this curious passage a distinction is made between *soles*, simply such, and *slippers* partially enclosing the feet. It seems also to indicate that the *crepidulæ*, as diminutives of the *crepidæ*, were so called because they were lower in height at the sides of the foot, and partook less of the nature of a complete shoe. Most of the specimens of ancient coverings for the feet contained in the present collection belong to the primitive class which is thus identified; and they accordingly constitute the first of the particular divisions into which these remains may be conveniently distributed, namely:

- i. *Soles and Sandals.*
- ii. *Crepidæ.* iii. *Calcei.*
- iv. *Miscellaneous Fragments of Leather*; apparently belonging principally to the upper parts of ancient shoes.

i. SOLES AND SANDALS.

These specimens consist of several varieties of *Soleæ*, of different sizes and thickness, and cut both of the straight form and also adapted to the right and left feet, but apparently not comprising any pairs. They are for the most part in a very imperfect and worn-out condition, excepting only those exceedingly thin soles which seem to have formed the interior layers of shoes of fourfold thickness.

The whole of the specimens of ancient soles were carefully examined in the year 1843, by Mr. Denvil, a very intelligent practical person, who drew up a series of interesting remarks

* Marcus Antonius. "Cum gallicis et lacernâ cucurriti."—*In M. Anton. Philopica* II., xxx.

on the collection†, in which some of the peculiarities of the Roman work are pointed out and explained. In noticing the soles of the *caligæ*, he observes that they were of three, four, or more layers of leather, of which the outside was considerably the thickest, the whole number being braced and held together by nails only, without stitching. Of these nails, some of the soles have the remains of a single row placed round the edge of the foot; others have a double line, and others have additional lines inserted down the centre of the broad part of the sole, with two or three more nails placed within the circle of the under-heel. The points of these nails were made very slight and sharp, that they might be easily turned and clenched on the inside of the sole.

In most of the present specimens which exhibit their original substance, the holes remain of the fastenings by which the upper-leathers, or the latchets, might have been secured, as well as of the nails by which the soles were secured or defended below. As there is not, however, a single instance in which any considerable part of the sides or ties is left remaining, it is now perhaps almost impossible to decide whether these fragments all belonged to *soleæ*, properly so called, or to sandals or more perfect shoes. The soles preserved in this collection may be described under the following varieties.

No. 1, A. *Exterior Soles*. Most of these specimens exhibit the ordinary Roman method for making soles of an extra thickness, by rows of nails driven through the several layers from the outside. In another division of these remains is a very perfect example of a *caliga*-sole so constructed, marked 1, B**, in which the separate pieces of leather are all visible at the side, with a small fragment of the bands for securing it over the foot inserted between them. No. 1, A* is a part of a small and light Sole, also exhibiting four layers held together by a strong close sewing or lacing, surrounding the foot, and having also a fastening of the same kind crossing the upper sole at the broadest part. It is probable that this sole once consti-

† Report to the Joint Grand Committee for Gresham Affairs, February 24th, 1843.

tuted part of a sandal, since there is a small triangular piece of leather yet remaining at the point of the foot, and intended to turn over, through which is a hole for receiving the band which passed between the toes.

No. 1, A**. Several Soles which have been formerly attached to others by sewing, and still exhibiting the marks of the long stitches all round the edges, though the material employed in the work is not now remaining. These specimens show that, in this method of uniting several soles, either a very thick piece of tough leather, like buck-skin, was used for the outside, to allow for the depth of the stitches, or that an outer sole was cemented on over the sewing.

No. 2, A. *Interior Soles*. The particular intention of these soles is ascertained by the smooth upper surface which they still exhibit, of a dull shining black—evidently showing that it was designed to be placed next the foot—contrasted with the rough appearance of the lower side, pierced with holes for securing them to the layers beneath. In size they are generally much smaller than the other specimens, and were most probably made for females and children.

No. 2, A*. A Double Sole for the left foot, which was possibly originally of some coloured leather, and belonging to a sandal, as it is cut into a peculiar form at the point, and is ornamented round the edges with the figure of a circle enclosing a star of six points. This is stamped between the small stitches by which the two layers of leather composing the sole are held still firmly together, with the assistance of some strong cement. The same figure is also inserted in a few places down the centre of the foot.

No. 1, B. *Caliga Soles*. Four Soles, of different sizes and composed of several different layers, fitted to the right and left feet, which have probably formed part of the *Caligæ* of Roman soldiers, being studded with large nails having broad protrud-

ing heads. These nails appear to have been so completely identified with the caligæ, as to be commonly known by the name of *claves caligares*; and Juvenal calls the soldiers *caligatos*†, from wearing such armed soles upon their feet. No. 1, B** exhibits two specimens of Caliga-nails, which were originally fixed in one of these soles.

The Sole marked No. 1, B* is peculiarly small in comparison with the others, since it measures only $7\frac{3}{4}$ inches in length by $2\frac{1}{4}$ inches across the broadest part of the foot, the ordinary proportions being nearly 12 inches by $3\frac{1}{4}$ inches. As this specimen is also set with nails, it may almost be regarded as exhibiting the size of the sole of a *Caligula*, or little military boot, such as that which, as Suetonius states, the Emperor Caius derived his surname from wearing, because he entered the army too young to put on the caliga of a common soldier‡. All the soles now described are quite level, and without any elevated or separate heels.

The first advance from the *Solea* is to the *Sandalium*, which, being sometimes provided with a piece of leather to cover the point of the foot, may be regarded as the transition-form leading to the *Crepida* and to real shoes. It seems to have been the Roman method of constructing a sole, to fasten the layer of the leather next the foot closely down to those which were below. Between the first sole and those beneath, whatsoever might be their number, the ends of several straps of leather were inserted, which, being firmly fastened in by the nailing, might be drawn together over the upper part of the foot. Sometimes the intermediate piece of leather appears to have formed a low exterior ridge round the foot, though it was still of the same piece as the latchets or ligatures by which the sole was secured over the instep or about the leg.

† “Cum duo crura habeas, offendere tot *caligatos*
Millia clavorum.”—Juven. Sat. xvi. 24.

“_____ *plantâ mox undique magnâ*
Calcor, et in digito clavus mihi militis hæret.”—Sat. iii. 247.

‡ Sueton. *De XII. Cæsaribus*, lib. iv. c. 9.

No. 1, c. shows part of the Fastening of a Sandal, consisting of a broad piece of leather, having a slit in one end, through which is drawn the termination of another band of the sandal, formed into a rude thick button,—which had passed between the great and second toes, and met and united with the corresponding ligature on the upper part of the foot, in the position in which the present specimen is placed.

No. 1, d. A piece of thin flexible leather, which has possibly formed that part of a sandal intended to cover the point of the foot, being curiously punctured with a rude ornament of a shape adapted to its position. The figure appears to have been executed by the edge of a wheel set with short diagonal parallel strokes, of the nature of a bookbinder's roll, which cut through the leather in a continuous line in any direction in which it might be guided. When perfect, the pattern measured 9 inches in width, and about 4 inches in height.

No. 1, d*. Another piece of the same kind of leather, ornamented in a style similar to the preceding, with a series of volutes between two straight lines. It measures 11 inches in length by $1\frac{1}{2}$ inch in width; and, as the upper edge has been folded down and secured with a broad hem, this piece of leather may have been employed to surround the sides of the foot. If any of the fragments of leather in the present collection were ever otherwise than black, these two pieces are probably some of the very few instances, as they appear at present to be approaching a faded olive. These specimens of ornamented leather may possibly belong to a period of time much later than the other examples; but there were many more such pieces, though less perfect, found with the disconnected fragments of shoes and sandals, at the depth of 29 or 30 feet below the surface of the large ancient pit.

ii. CREPIDÆ.

The ligatures of the sandal class of coverings for the feet seem gradually to have been extended into broad latches rising

up at the sides of the sole, or springing out of a piece of leather enclosing the heel; and the *crepidæ* were also formed into loose slippers, which were made to fit either foot indifferently. The side-latchets of these shoes were constructed somewhat on the principle of a modern patten-tie, being of substantial leather, usually cut into wide openwork, discovering the colour of the clothing of the foot below; which openwork or reticulation seems to have been common to *crepidæ*, and was evidently sometimes very ornamental. The most simple form of the latchets had probably but one fastening, namely, on the instep, where the two points met of a line which passed round the heel, enclosing the whole foot. Below, the leather was all the way cut into open panels, with very narrow pieces left between each by way of support.

Though there can be no doubt that the Roman sandals were fastened by bands wound round the legs and feet, yet it is possible that they may have been occasionally confounded with some ancient representations of the separate ties of the *crepidæ*. With this limitation expressly understood, Mr. Delvin's observation is accurate, that the Roman shoemaker produced the means for exhibiting the appearance of intricate ligatures and lacings in the openwork latchets here described, in the original cutting out of the leather. "He did it all," says Mr. Delvin's Report already referred to, "out of the one flat piece of leather as it lay before him on the cutting-board; and, when he had finished the article, there was no other lacing required than the mere drawing and bracing together of one line of loops, whether the direction of this line was up the centre of the foot, on the side, or placed in any other way."

[No. 2, A. A specimen of a worn-out *Crepidæ*, imperfectly exhibiting the connection of the *corrigiæ*, or latchets; but, from the inner linings of the sole next the foot being gone, the method of making the ties and of attaching them to the shoe is particularly discovered. It will be seen that they were originally stamped out of one piece of leather, a broad plain space being left between them. This was then partly separated down

the centre into two wide margins, one of which remained attached to each piece of openwork, and they were also left connected together in the middle by a narrow strip of leather, so cut as to form part of both. The margins were next drawn apart, so far as to allow the lachets to stand up at the sides of the foot, and were secured to the interior soles by the points of the nails which defended and strengthened the external sole below. The inside of the *crepida* was then lined with some thinner sole or stuffing.]

No. 2, B. Another specimen of a *Crepida* with a single tie. The openwork enclosing the heel is stamped into squares and triangles, and is ingeniously made to terminate in a loop on the instep, where it was secured by the *ansa* or band by which it was tied; to the pressure of which on the upper part of the foot a reference is made by Tibullus*.

Nos. 2, C; 2, D; 2, E. Fragments of the *Anseæ* or Lachets of *Crepidæ*, stamped with ornamental openwork, which were probably all secured by single ties; but in the last instance the side and upper edge are wanting.

It is evident, however, that this kind of slipper was also intended to be secured by several bands through the loops called *anseæ*; for in this contrivance appears to lie the force of the anecdote of Apelles and the shoemaker, related by Pliny†, where he states that the painter had represented the *crepidæ* of a figure with one latchet less than the number which they should properly have. There are likewise some fragments of this kind of shoe in the present collection, of which the following are specimens.

No. 2, F. Two mutilated Soles, similar in construction, though probably not belonging to each other; of which are only

* "Ansaque compressas colligit arcuâ pedes."—Lib. i. 9, 14.

† "Feruntque (Apellem) à suture reprehensum, quòd in crepidis (hominis picti) una intus pauciores fecisset ansas."—*Hist. Nat.*, xxxv. 10. Dr. Philemon Holland, in the only English translation of this work, published in 1601, evidently understood the word to signify slippers, by rendering it "the shoe or pantophle."

now remaining two pieces of leather appearing to have formed some of the outer layers, perforated with the holes of the nails by which they were defended and held together. On each side of an interior sole which was laid upon the external thickness, there is left a broad margin cut into three triangles, standing up $1\frac{1}{2}$ inch in height, intended to fold over the instep, and one of them still remains shaped into a trefoil at the apex. The next two backward are perforated in the points as if to receive ligatures, but the extremity of the foot and the heel appear to have been enclosed in cases, cut into ornamental openwork, of which, however, the smallest fragments only are remaining. All the rest of these specimens are too much mutilated to admit of any description.

No. 2, G. Another example of a *Crepida* which had probably several ties. It consists of a thick shallow case for the foot, formed from a single piece of leather; and, from the manner in which it has been worn out, was evidently an exterior shoe, though there are not any indications of nails remaining in the sole. It originally enclosed the heel in a case of plain leather, standing $1\frac{1}{2}$ inch in height, having a deep stamp, like an inverted capital C, cut into each of the quarters on the outside. The extreme point of the foot was covered by thick open loops, which were possibly drawn together by ligatures; but the upper points of the leather surrounding the heel had certainly strong strings of the same material attached to them for tying over the foot, of which some indications are still remaining. Beyond the case for the heel are two low and broad *ansæ*, cut out of the centre of the side-leathers, which yet retain the marks of the ligatures that bound them together across the instep,

No. 2, H. A specimen of the Upper-leather, consisting of a single piece, of a small and elegant *Crepida* for the left foot, constructed either for a female, or possibly it may exhibit an instance of the delicate Sicyonian shoes worn by effeminate men. It retains a considerable part of the stamped openwork which met over the instep, intended for displaying through the

interstices the colour of the covering of the foot beneath. The loops on the outside of the foot, it may be observed, are longer than those on the interior, to which they were laced over by separate ligatures, the marks and effects of which are still visible on the leather. As all the back parts of the specimen are wanting, it is impossible to affirm positively that this *crepida* was provided with one principal *ansa* to be fastened across the instep, though it is most probable that there was such an arrangement; but, as the sole is flexible and without nails, the fragment appears to have belonged to that sort of dress-shoe which are shown in ancient examples to have been sometimes worn under the *calcei**. The Romans were certainly accustomed to lay aside their outer shoes before they reclined at a banquet, when the light ornamental *crepidæ* might have been exhibited; and “to call for the *calcei*,” to re-cover the feet, apparently became a familiar phrase for departing from an entertainment†. It is possible, however, that the present specimen may represent the *Campagus*, or shoe with flexible latchets, usually worn by persons of quality. This article is one of two instances only, of the ancient remains of leather now described, which have the original titles preserved, recording the place of discovery. The notice referred to states that the specimen was found in the large hole, about 30 feet deep, on the 22d April, 1841.

Nos. 2, 1; 2, κ. The remains of two small *Crepidæ*, the general character of which is, that the quarters form a high solid case round the heel to the ankle, and then slope downwards to a low ridge at the sides of the foot, where they are surmounted by openwork. These reticulations were intended to be drawn together by ligatures, which lacing probably continued almost to the point of the foot; but the specimens are imperfect, and those ends of the shoes are not remaining. The upper parts of the quarters are formed into loops for tying over the instep, and all the sewing is one seam up the back of the heel, with a small

* Montfaucon, *Antiquité Expliquée*, tome iii. 1 partie, planche xxxiv. p. 66.

† “Quam multi, quàm lector, aut lyristæ, aut comædus inductus est, *calceos poscunt*.” —Plin. *Epist.*, ix. 17.

quantity on each side of the sole at the same part, for adapting the *crepida* to the foot. Each of these specimens is cut out of one piece of leather; but that marked No. 2, κ is smaller, and formed of two plies or folds, of more flexible skin than the former. These layers, however, as Mr. Delvin observes, being both of the same light description, were very exactly laid together, and were probably further secured by some powerful cement, so that the finished shoe had neither inconvenience of weight nor rudeness of appearance.

No. 2, L. A small part of the *Ansa* or Latchet of a *Crepida*, cut out of thick leather.

Nos. 2, M; 2, N; 2, O; 2, P; 2, Q. Fragments of Stamped Leather openwork, from the heels and toes of other *Crepidæ*.

iii. CALCEI.

If the name of this species of shoe be rightly derived from *calx*, the heel, as expressive of a covering for the foot from the heel to the toe, the peculiar nature of it seems to be clearly distinguished and understood. The *Calcei* seem generally to have been formed to fit the respective feet with great accuracy, and Cicero incidentally notices the ease and exactness with which they were made at the city of Sicyon*, the wearing of which had become a sign of unmanly effeminacy, and originated the saying of "Sicyonian shoes." They appear, however, when they were left unfastened, to have sat very ungracefully upon the feet, which, as Ovid expresses it, seemed to float in them†. The design of the *calcei*, no doubt, was to furnish defensive coverings for the feet of the buskin kind, either enclosing the whole foot, or to be worn over other shoes which were lighter and more ornamental. They probably did not always meet in front of the foot, though they were made to stand up behind it, and at

* "Si mihi *calceos Sicyonios* attulisses, non uterer, quamvis essent habiles et apti ad pedem; quia non essent viriles."—*De Orat.*, i. 54.

† "Nec vagus in laxâ pes tibi pelle natet."—*De Arte Amandi*, l. 511.

"————— male laxus

In pede calceus hæret."—*Horat. Sat.*, i. 3. 31.

the sides as high as the ancle. The only example of this species of shoe in the present collection appears to be the following.

No. 3, A. A *Calceus*, or Buskin, for covering the foot and ancle, enclosing the back of the leg to the height of nearly six inches from the sole. For about two inches from the point of the foot the upper-leather is joined by a strong central seam, from the end of which, to the very top of the buskin, extends on each side a series of ten large oval holes, cut out by a stamp, for receiving the *corrigiæ* by which it was tied. As this specimen was evidently intended to be worn as an external defensive shoe, it appears to have been strengthened by outer soles secured by caliga-nails, the holes of which are still remaining.

No. 3, B. The entire upper part of a close Shoe of the *soccus* or buskin kind, apparently made of a single piece of very thick and coarse leather, originally sewed up the inside of the foot in one seam; and it was probably secured by two latches meeting over the instep. In this instance, as in all the preceding, the exceedingly small quantity of sewing in the Roman shoes is particularly remarkable.

iv. MISCELLANEOUS FRAGMENTS OF LEATHER.

In addition to the more perfect specimens of ancient coverings for the feet described in the preceding articles, the excavations at the Royal Exchange were found to contain a considerable number of unconnected fragments of leather, more or less decayed or capable of conjecture as to the original use of the respective pieces. From the straplike appearance of many of these fragments, it was at first supposed that they had once formed portions of *retinacula*, or harness; but subsequent cleaning and examination proved that, certainly for the most part, they had rather originally belonged to the soles with which they were discovered. These remains, however, were all too defective, as well as too much mutilated and decayed, for any successful attempt to be made at restoring them to their original perfect arrangement; but a careful comparison of the

several pieces, with the more complete specimens, has in some degree explained and identified the purposes for which they were designed, at least to a very probable conjecture, and sufficiently accurate for their distribution into a convenient order for inspection. The fragments in general are of black leather, similar to that of the other articles, but there are some pieces which may possibly have been once of another colour. It is most probable that the upper surface was almost always shining, and several instances may be noticed where it still retains a dull gloss, which appears usually to have protected that particular side. The interior of nearly all the remains is rough and easily to be rubbed away in fibrous fragments, from having been left undefended by any additional preparation, and being therefore, at present, in a state of greater decay. Sometimes, however, both surfaces of the material appear to have been glazed, though the whole substance is broken and in a condition of exfoliation. Those pieces of leather which have been wrought to form parts of shoes are in general single only, but in some instances two plies or folds have been laid together, with a strong cement between them, which has increased their rigidity and tendency to break upon the surfaces. The detached fragments of leather now to be described appear to belong to the following divisions.

No. 4, A. Several broad pieces of Leather, ornamented with the punctured lines already described in the account of the specimen marked No. 1, D. From the peculiar arrangement of the lines, the depth and form of the material, and the edge still retaining indications of the seam up the back of the heel, these fragments evidently formed part of the hind-quarters of some species of shoes. Along the lower edges may be seen the holes through which they were fastened to an inner sole by studs or small nails.

No. 4, A*. A piece of stout Leather cut in a low curve, apparently intended for the back of a *solea* or sandal, where it was to stand up as a defence for the heel. The perforations of

the nails by which it was attached to the soles, with the fold which passed between them, are all distinctly to be perceived.

No. 4, B. Narrow pieces of Leather, many of which are ornamented with parallel lines of punctures along the sides, and one of them with the volute pattern already noticed at No. 1, D*, with which it might have possibly at one time corresponded. Several of these fragments were probably intended to form the low sides of sandals or *gallicæ*; and perhaps some pieces may have been designed for the *ligulæ* or bands of sandals.

No. 4, C. Remains of Latchets and Ties for the fastening of various kinds of shoes. One of the former, marked No. 4, C*, presents a remarkably rude example of that particular part of a *crepida*, formed out of very thick and strong leather.

No. 4, D. Broad pieces of Punctured Leather, apparently intended as coverings for the points of the feet, some of which are exactly similar to that already described at No. 1, D, both in pattern and material.

No. 4, E. Several large and shapeless pieces of Leather, which may have formed part of some species of shoe, sock, or even boot, not now to be ascertained by means of any of the other remains in this collection. From the torn edges and extremely decayed state of these fragments, their original intention cannot now be identified, but the material appears to be quite the same as that of the other specimens; and it is, perhaps, not quite impossible that they are skins of leather which have never been made up into any article. There are in the collection some other remains of leather, of which the same conjecture might be formed; as two of the punctured pieces supposed to have been intended for the points of sandals, which have their edges quite perfect without any traces of sewing. Some other fragments also appear like refuse leather, from which pieces of different figures have been cut out.



IV. COINS.

THE Coins enumerated in the following lists are generally inconsiderable in numismatical value, and far from being remarkable as to beauty or preservation; though they nevertheless comprise a few rare types and some very perfect specimens. So far as the several pieces were capable of being decyphered they have been carefully examined and described, as well for the satisfaction of such as desire to have an explicit account of all the articles discovered in forming the foundations of the New Royal Exchange, as for the most ready information of the visitors to those antiquities preserved by the Corporation of London at Guildhall.

The numismatical reliques here enumerated were found beneath several different parts of the edifice, at different depths, corresponding with their respective antiquity. They will be therefore most naturally and conveniently arranged under the divisions of—i. *Roman Coins*; ii. *English Coins*; iii. *Foreign Coins*, including *Jettons* and *Counters*. A few coins are so completely corroded, or otherwise defaced, as to be almost entirely undecypherable, which may be noticed briefly and collectively in conclusion; and there are also some miscellaneous articles, chiefly of metal, which appear more properly to belong to this class than to any other.

i. ROMAN COINS.

The coins of this series are the most numerous of all those which are contained in the present collection; and those which can be by any means identified amount to Forty-nine. They were for the most part discovered in the old Roman gravel-pit, between 15 and 30 feet in depth, during the months of April and May, 1841, though some of them were found at other parts

of the excavations, before the opening of that great receptacle of these antiquities. The oldest coin which can now be identified is one of Augustus, but those of Vespasian and Domitian are the most numerous, especially the latter; and the latest piece having a title stating that it was found in the gravel-pit is a small coin of the third brass of Septimius Severus, of the early part of the third century, which has been plated. Probably, however, another small coin of Gratianus, which was lost and subsequently recovered, and which can be accurately traced to A.D. 374, indicates more exactly the time when the great gravel-pit was closed and built upon, and consequently, the age of the antiquities already described, namely, about sixty-five years before the departure of the Romans from Britain.

It seems to have been an occasional practice in London to regard Roman coins discovered on the site of an old building as types of the antiquity of the spot, and as worthy of permanent record in connection with the new structure erected thereon. The medallions of Roman emperors sometimes represented on the decorated fronts of houses, down to the early part of the seventeenth century, are considered to have originated in this practice; and a very curious instance of it is related by Anthony Munday, in his *Additions to Stow's Survey of London**, which is additionally interesting in connection with the subject of these pages, as incidentally noticing a collection of ancient coins, preserved at Guildhall, more than two centuries since. In the account of Aldgate he states that "the old ruinous gate being taken downe, and order provided for a new foundation (in 1607), divers very ancient peeces of Romane coyn were found among the stones and rubbish, which, as M. Martin Bond, a worshipful citizen, and one of the surveyors of the worke, told me, two of them, Trajanus and Diocletianus, emperors, carved in stone according to their true forme and figure, he caused to bee fixed on either side of the gate's arch without, eastward. The rest of these stamped Romane peeces were sent for by the lord mayor and his brethren to the Guild-hall, where as yet they remaine to be seene." The Rev. John Strype adds

* Fourth edit. 1633, p. 121. See also Leland's *Collectanea* (1774), vol. i. p. lxii. lxxii.

to this passage, in 1720*, that “the other Roman coins found in the old walls were of Clodius Albinus, Vespasian, Domitian, Carausius, Valentinianus. The forms and subscriptions thereof the said Mr. Bond caused to be carved in free-stone, and set over the conduit-door just within the gate.” By the inscription which was placed over the new Aldgate, it appeared that these pieces were found at the depth of 16 feet, a level at which several of those of a later date, contained in the ensuing lists, were also discovered; but it will not fail to be observed that the Roman coins of the present collection are generally superior in age and variety to those referred to by Anthony Munday.

The metal of the coins about to be enumerated is principally copper, but there are also some of yellow brass, a few of silver, and one or two of brass with ancient silver plating. In size they are for the most part of that called by numismatists “second brass,” though there are likewise some good specimens of the first and third orders. In the description of these pieces, they will be found arranged under the names of the several Emperors for whom they were struck, in the succession of the Consulate appearing on the obverse; the dates of which according to the Year of Rome and that of the Christian era, according to the chronology of Mediobarbus†, are added as convenient illustrations. The reverse of the coin, with the legend belonging to it, is the side which is usually described, as the specimens may be more readily identified by the variety of type and the distinctive inscription thereon exhibited. The particular part of the excavations wherein each piece was found is then added, with the date when it was discovered, transcribed from the titles which were originally attached to the specimens, or from the papers in which they were at first preserved.

In concluding these introductory notices, it should be observed that many of the present specimens have become irrecoverably corroded by their long interment in the soil from which they were taken, as well as by their intimate contact with various other causes of destruction. Some of the pieces

* The Fifth edition, Lond. 1720, fol. vol. i. book 2, ch. ii. p. 23.

† *Imperatorum Romanorum Numismata*, Mediol. 1730, fol.

were found completely encrusted with lime, mortar, and cement; and others were probably mutilated, or even entirely defaced, before they were lost beneath the site of the new Royal Exchange. With the exception, however, of a few only, the types of the coins preserved in this collection have been, by a very careful and repeated examination, so far recovered as to identify the several specimens in a manner sufficiently satisfactory for description, though a small number of the numismatical remains are destroyed beyond the means of tracing on them any distinctive marks whatsoever.

I. AUGUSTUS. [First Brass. The head laureated: *Legend*, DIVVS AVGVSTVS. *Reverse*, S C in large letters in the field of the coin: *Leg.* IMP. NERVA. CAESAR AVGVSTVS REST.*] Found in the large gravel-pit on the north side, April 28th, 1841, with five other coins of Vespasian, Domitian, and Trajan.

.II. TIBERIUS CLAUDIUS. [Second Brass: *Rev.* A female figure seated, holding out ears of corn with the right hand, and with the left supporting a long torch, which is lying across her diagonally: *Leg.* CERES AVGVSTA: in the exergue S C. A brass coin.] Found in the large gravel-pit, 26 feet down at the west end, March 2d, 1841.

III. NERO. [Second Brass: III. Consulate, A.U.C. 811, A.D. 58. The head laureated: *Rev.* The temple of Janus with the gates shut, between S C. *Leg.* nearly obliterated, PACE P. R. TERRA. VBIQVE. PARTA. IANVM. CLVSIT†. This specimen is much corroded.] Found in the large gravel-pit, April 28th, 1841.

IV. FLAVIUS VESPASIANUS. No. 1. [A silver Denarius: VI. Consulate, A.U.C. 830, A.D. 77. The head laureated: *Leg.* VESPASIANVS IMP CAESAR. *Rev.* Rome, as a female

* This coin is noticed as having a rare reverse, in Mr. J. Y. Akerman's *Descriptive Catalogue of rare and unedited Roman Coins*, Lond. 1834, 8vo. vol. i. p. 140.

† Noticed by Akerman as a rare reverse, vol. i. p. 165.

VESPASIANUS.

figure seated on a throne, holding out an olive-branch: *Leg.* PON MAX TR P COS VI.] Found, with five other coins of Augustus, Vespasian, Domitian, and Trajan, in the large gravel-pit on the north side, April 28th, 1841.

No. 2. [Second Brass: II. Consulate, A.U.C. 825, A.D. 72. *Rev.* An eagle with wings expanded, standing on a globe, between the letters S C.] Found 16 feet down at the east end, under the foundation of the old arcade, December 21st, 1840.

No. 3. [First Brass: III. Consulate, A.U.C. 827, A.D. 74. *Rev.* The emperor laureated and habited in the toga, standing, in the act of raising up Rome, represented as a winged female figure kneeling: behind her is another female figure in a helmet, with a shield. *Leg.* ROMA RESVRGES: in the exergue S C*.] Found in the large gravel-pit on the north side, April 28th, 1841, with five other coins.

No. 4. [Second Brass: apparently of the III. Consulate. *Rev.* A female figure standing, holding a cornucopia, between S C. *Leg.* FIDES PVBLICA. A brass coin.] Found on the north side of the large gravel-pit, under the foundation of the wall, April 30th, 1841.

No. 5. [Second Brass: IIII. Consulate, A.U.C. 828, A.D. 75. *Rev.* A female figure seated, looking to the right, raising her right hand to her head, and holding a sceptre in her left: beside her is an altar with the fire burning, and decorated with garlands. *Leg.* SECVRITAS AVGVSTI: in the exergue S C.] Found in the gravel-pit, from 20 to 30 feet deep, with three other coins of Severus and Domitian, May 2d, 1841.

No. 6. [Another specimen of the same coin as No. 5, very much defaced.] Found, with a large jetton, under the wall at the north-west angle, May 11th, 1841.

* Noticed and engraved by Akerman as a rare reverse, vol i. p. 186, pl. v. No. 6.

VESPASIANUS.

No. 7. [Second Brass: vi. Consulate, A.U.C. 830, A.D. 77. *Rev.* A large square altar between S C. In the exergue PROVIDENT.] Found in the large cesspool over the gravel-pit, at the north-west angle, 23 feet deep, April 26th, 1841.

No. 8. [Second Brass: viii. Consulate, A.U.C. 833, A.D. 80. *Rev.* A female figure standing between S C, and holding a cornucopia; the whole nearly effaced, together with the legend. A brass coin.] Found in the soil removed from the large gravel-pit, at the south-west angle, April 27th, 1841.

No. 9. [Second Brass. The obverse greatly defaced and the reverse quite obliterated. A brass coin.] Found, with a coin of Domitian, in the large gravel-pit 30 feet deep, April 30th, 1841.

V. DOMITIANUS. No. 1. [A silver Denarius: viii. Consulate, A.U.C. 835, A.D. 82. The head laureated: *Leg.* IMP CAES DOMITIANVS AVG P M. *Rev.* An altar with the fire burning, and decorated with fillets and garlands: *Leg.* TR POT COS VIII P P.] Found, with five other coins, in the large gravel-pit on the north side, April 28th, 1841.

No. 2. [Second Brass: v. Consulate, A.U.C. 829, A.D. 76. A youthful head laureated, with the surname of GERMANVS in the legend. *Rev.* A crowned female figure (*Spes Dea*) standing between S C, holding up a flower in the right hand and lightly supporting her outer robe with the left. *Leg.* defaced, COS V. PRINCEPS IVENTVTIS.] Found in the large gravel-pit, 30 feet deep, April 26th, 1841.

No. 3. [Second Brass, apparently of the v. Consulate. *Rev.* A female figure standing between the letters S C, holding a caduceus in the right hand and a cornucopia in the left. *Leg.* FELICITAS PVBLICA.] Found in the large gravel-pit, from 20 to 30 feet deep, May 2d, 1841, with three other coins.

DOMITIANUS.

No. 4. [Two coins. Second Brass: x. Consulate, A.U.C. 837, A.D. 84. *Rev.* A female figure standing between the letters S C, holding scales in the right hand: *Leg.* MONETA AVGVST.] The first coin, greatly defaced, found 16 feet down at the south end of the drain, December 2d, 1840; the second found with another coin, March 20th, 1841, in the cesspool, on the centre of the north side.

No. 5. [Second Brass: XII. Consulate, A.U.C. 839, A.D. 86. *Rev.* A figure of the emperor standing with his left foot on a globe, holding in his right hand the *hasta pura*, or headless spear, and in his left the short sword called *parazonium*: *Leg.* VIRTVTI AVGVSTI.] Found April 24th, 1841, 30 feet deep, in the large gravel-pit.

No. 6. [Three coins. Second Brass: XII. Consulate. *Rev.* A female figure holding scales and a cornucopia, between the letters S C: *Leg.* MONETA AVGVSTI.] The first found April 22d, 1841; the second found in the gravel-pit, April 28th; the third found, with three other coins, May 2d, from 20 to 30 feet in depth.

No. 7. [Two coins. Second Brass: XIII. Consulate, A.U.C. 840, A.D. 87. *Rev.* The figure of the emperor, as in No. 5, called "the *Virtus* type."] The first, a brass coin, found in the large gravel-pit, 30 feet deep, April 24th, 1841; the second, of copper, found April 28th.

No. 8. [Second Brass. *Rev.* A female figure with scales, as in No. 6, called "the *Moneta* type."] Found near the bottom of the large gravel-pit, on the south side, at 30 feet average depth, April 30th, 1841, with a brass coin of Vespasian.

No. 9. [Second Brass, large. *Rev.* A female figure standing, with a rudder in her right hand and a cornucopia in her left, between the letters S C: *Leg.* FORTVNAE AVGVSTI.]

DOMITIANUS.

Found, with a coin of Nerva, in screening the dirt removed from the old gravel-pit, at 30 feet in depth, May 16th, 1841.

No. 10. [Another coin of Domitian, of the Second Brass, much corroded, but of a large size, and apparently of the same type and consulate as No. 9.] Found in the large gravel-pit, 30 feet deep, April 28th, 1841.

No. 11. [Second Brass. Two coins almost entirely defaced, but one apparently of the xvii. Consulate.] Found in screening the soil removed from the large gravel-pit, at about 30 feet in depth, May 4th, 1841.

VI. NERVA. [Second Brass: iv. Consulate, A.U.C. 851, A.D. 98. *Rev.* A female figure standing between S C, holding a rudder and a cornucopia: *Leg.* FORTVNA AVGVST.] Found, with a coin of Domitian, in screening the dirt removed from the old gravel-pit, 30 feet deep, May 16th, 1841.

VII. TRAJANUS. [Two coins. First Brass: v. Consulate, A.U.C. 858, A.D. 105. The head laureated. *Rev.* A female figure standing between S C, habited in a stole, and holding a branch in her right hand and the *hasta pura* in the left; an ostrich stands by her right side: *Leg.* S P Q R OPTIMO PRINCIPI: in the exergue ARAB ADQVIS. Brass coins. In the second example the date on the obverse is illegible, and the coin is mutilated in size.] The first specimen was found, with five other coins of Augustus, Vespasian, and Domitian, on the north side of the large gravel-pit, April 28th, 1841.

VIII. HADRIANUS. [Second Brass. The head laureated: Reverse entirely defaced.] Found, with three other coins, March 6th, 1841.

IX. ANTONINUS PIUS. No. 1. [First Brass. A youthful head laureated. *Rev.* A female figure standing between the

ANTONINUS PIUS.

letters S C, holding a caduceus in the right hand and supporting a cornucopia over the left shoulder: *Leg. FELICITAS AVG.*] Found in the large gravel-pit, April 30th, 1841.

No. 2. [Second Brass. A crowned head, bearded. The reverse destroyed by corrosion, retaining only the indications of a standing figure.] Found December 14th, 1840, at the south corner, 28 feet deep.

X. [FAUSTINA THE ELDER. No. 1. First Brass. *Rev.* A female figure standing between the letters S C, looking to the left. This piece is greatly corroded and defaced.] Found, with other coins, 10 ft. deep in the south-east excavations, Nov. 26th, 1840.

No. 2. [Second Brass. Very much corroded and defaced; the reverse apparently had the consecration-type of an eagle, bearing the effigy of the empress between the letters S C.]

XI. MARCUS AURELIUS. [No 1. First Brass: TR. POT. VII. A.U.C. 906, A.D. 153. Reverse defaced. A brass coin.] Found in the large gravel-pit, near an altar, 16 feet below the surface, with sundry leather, bones, *etc.*, April 27th, 1841.

No. 2. [First Brass: III. Consulate, A.U.C. 916, A.D. 163. *Rev.* A female figure, holding a patera over an altar on her right side: *Leg. SALVTI AVGVSTORVM:* in the exergue, COS III S C.] Found, with three other coins, March 6th, 1841.

No. 3. [Second Brass: III. Consulate. *Rev.* Mercury standing and looking backwards, holding in his right hand a purse, and in his left the caduceus; a cock at his left foot*. Very much corroded, and the legend entirely defaced.]

[* Noticed by Akerman as a rare reverse, vol. i. p. 288.]

XII. [FAUSTINA THE YOUNGER. First Brass. *Rev.* A figure of the empress standing between the letters S C, holding

FAUSTINA THE YOUNGER.

two children in her arms, with two others standing on each side of her below: *Leg.* FECVND AVGVSTAE.] Found in the large gravel-pit, 15 feet below the level of the pavement, May 7th, 1841.

XIII. SEPTIMIUS SEVERUS. [Third Brass. *Rev.* A figure of the emperor holding a patera over a tripod, with a spear in the left hand: *Leg.* RESTITVTOR VRBIS.] Found, with three other coins of Vespasian and Domitian, in the gravel-pit, from 20 to 30 feet in depth, May 2d, 1841.

XIV. VALERIANUS. [A counterfeit and washed medallion, probably cast. *Obverse*, The emperor's head with a radiated crown. *Rev.* The figure of Hygeia looking to the left, and having a serpent twined round her, which she is feeding from a patera: *Leg.* SALVS AVGG.*] Found April 14th, 1841, on the north-west of the merchants' area.

[* Noticed by Akerman as a rare reverse, vol. ii. p. 6.]

XV. [VICTORINUS SENIOR. Third Brass. *Obv.* The emperor's head with a radiated crown. *Rev.* The figure of Hygeia standing, looking to the left, and holding a serpent in her left hand; in her right hand is a patera, to which another serpent is rising up from behind an altar: *Leg.* SALVS AVG.*] Found November 25th, 1840, 16 feet deep, at the south-east angle of Sweeting's alley.

[* Noticed by Akerman as a rare reverse, vol. ii. p. 67.]

XVI. [CARAUSIUS. Second Brass: much mutilated and defaced. *Rev.* A female figure standing between the letters S C, apparently holding a garland, with the *hasta* in the left hand: in the exergue M L: *Leg.* (pax aete)RN AVG.] Found in a hole at the north-west angle, 27 feet deep, May 7th, 1841.

XVII. [CONSTANTIUS I. (*Chlorus*). Second Brass. The emperor's head crowned with the *vitta* or royal fillet. The reverse

CONSTANTIUS.

defaced, but apparently the Genius of Rome.] Found 10 feet down in the centre of the area, March 5th, 1841.

XVIII. [FLAVIUS VALENS. Third Brass: mutilated. *Rev.* The figure of Victory marching, bearing a palm branch and garland. Apparent legend, SEMP VICTOR REIPUBLICAE: in the exergue M A Q S.] Found, 14 feet deep, at the south-west angle, March 5th, 1841.

XIX. [GRATIANUS. No. 1. Third Brass: A.U.C. 1127, A.D. 374. The emperor's head crowned with a fillet of pearls, the ends of which hang down behind. *Rev.* A figure on a throne, holding a mound in the right hand and a spear in the left: *Leg.* CONCORDIA AVGGG: in the exergue S N A B.] Found March 6th, 1841.

[No. 2. Third Brass: A.U.C. 1135, A.D. 382. *Rev.* A figure of the emperor standing, holding the standard called the *labarum* in his right hand, and resting on a shield with his left: *Leg.* GLORIA NOVI SAECVLI: in the exergue . . CON.] Found, 15 feet deep in the chalk wall, in the foundation of the south-west angle of the merchants' area, March 7th, 1841.

XX. [ROMANUS. Second Brass: A.U.C. 1712-1716, A.D. 959-963. The obverse entirely defaced. On the reverse is the following inscription, disposed in five lines, in mixed Roman, Greek, and Gothic letters: ¹ ✱ RΩMA ² εν ΘΕΩ ΒΑ ³ ΣΙΛΕΥΣ ΡΩ ⁴ ΜΑΙΩΝ ⁵ Σ Ρ Α Ρ Σ . . .] Found November 27th, 1840, on the foundation ground-line.

2. ENGLISH COINS.

The series of later antiquities and miscellaneous articles discovered in forming the foundations of the New Royal Exchange must be regarded as commencing with the present division of this catalogue. The pieces described in the two lists ensuing were, of course, found much nearer to the surface of the ground than most of the coins contained in the preceding division ; and were disinterred at various depths, varying from two to eighteen feet, between September, 1840, and the following April. They occurred, also, beneath all the different parts of the former buildings, and up to Sweeting's alley on the east. The English coins enumerated in this list comprise Twenty-seven pieces. They do not include any very rare or valuable specimens, and many of them are greatly defaced or are of very modern date ; but, that they may all be recognized and referred to without difficulty, they are historically arranged and explicitly described in the following catalogue.

No. 1. [HENRY IV.? A Denier of black-money, very much defaced and imperfect in figure, but bearing a variation of one of the ordinary types of the Aquitaine Pennies. *Obv.* The field divided by a slender cross between a fleur-de-lis in the first and fourth quarters, and a lion passant-guardant in the second and third: *Legend*, Within a plain double circle HEN(*ricus rex ang*) L'E. *Rev.* A cross patée at the extremities extending to the inner circle: *Leg. (domi)*NVS: A QV(*itani*)E.] Found March 19th, 1841, in the centre of the works, 14 feet down.

No. 2. EDWARD VI. [Two Shillings, made of the basest metal of this reign, greatly resembling copper, very irregular in form, and almost completely defaced. On the *obverse* the king's head in profile, crowned ; and on the *reverse* the royal arms in a cartouche-shield, between the letters E R, with the usual

legend, TIMOR DOMINI FONS VITE. (Prov. xiv. 27.) The mint-mark is not to be decyphered.] Found at the centre-front on the south, westward, 12 feet deep, February 11th, 1841.

No. 3. [A Penny in silver, of the same reign. *Obv.* The king's head in profile, crowned: *Leg.* ROSA SINE SPINA. *Rev.* A cross-fourchée, extending to the edges of the coin, surmounting the royal arms in a plain shield: *Leg.* CIVITAS LONDON.] Found January 7th, 1841, under the old north entrance, 10 feet down.

No. 4. ELIZABETH. [Two Shillings of silver, both greatly defaced, and the queen's head on the obverse hardly to be discovered. *Rev.* The royal arms in a plain shield, surmounted of a cross-fourchée, extending to the edges of the coin: *Leg.* POSVI DEVM ADIVTOREM MEV(*m*). The mint-mark, on both sides in the inscription, is a martlet, the allusive device of Sir Richard Martin, warden of the Mint between 1571 and 1581, the 14th and 23d years of Elizabeth. From this distinguishing figure, which has been mistaken for a drake, the coin was formerly called "the Drake shilling," and was supposed to have been struck in commemoration of Sir Francis Drake's voyage round the world*.] The first of these pieces was found March 20th, 1841, in the large cesspool, on the centre of the north side of the Exchange. The second, which is almost entirely defaced, was discovered March 29th, under the foundations at the south-east angle.

[* *Annals of the Coinage of Britain*, by the Rev. R. Ruding, 1819, vol. v. p. 135, note y.]

No. 5. CHARLES I. [A Royal Farthing Token, very much mutilated and defaced. On the *obverse* a crown with two sceptres in saltire. *Rev.* A crowned rose.] Found December 28th, 1840, under the north-east angle of the old arcade-walk, 16 ft. down.

No. 6. CHARLES II. [Two Farthings. *Leg.* CAROLVS A CAROLO. *Rev.* Britannia: the date quite effaced.] Found December 3d, 1840, at the south-east corner, 15 feet down.

No. 7. WILLIAM AND MARY. [A Halfpenny, very much defaced. *Rev.* Britannia, 1694.] Found, with counters, in the rubbish at the south-east corner, December 10th, 1840.

No. 8. WILLIAM III. [Two Halfpence, one of which retains the year 1701; the reverse and date of the second are quite obliterated.] Found, with other coins, November 27th, 1840, at the south-west angle, 18 feet deep, on the foundation ground-line.

No. 9. [Two Farthings, 1694 and 1701.] Found December 4th and 5th, 1840, at the south-east angle, 17 feet deep, with another coin quite defaced.

No. 10. GEORGE I. [A Farthing, 1719.] Found November 27th, 1840, at the south-west angle, under the wall, 18 feet deep.

No. 11. GEORGE II. [A Halfpenny, 1740.] Found on the south side, 3 feet down.

No. 12. [A Halfpenny, 1747.] Found November 24th, 1840, 2 feet from the surface, at the south-west angle.

No. 13. [Two Halfpence, one of 1755, the other date obliterated.] Found November 27th, 1840, on the surface of the foundation ground-line, and in the rubbish 18 feet deep.

No. 14. [A Farthing, 1739.] Found November 26th, 1840, at the south-west angle, about 15 feet deep, with other coins.

No. 15. GEORGE III. Four Halfpence. Two of 1770, found November 24th, 1840, at the south front, 2 feet from the surface; and November 26th, at the south-west angle, about 15 feet deep, with other coins. One of 1771, found February 18th, 1841, at the south front. One of 1773, found December 3d, 1840, at the south-east corner, 15 feet down, with two Farthings of Charles II.

No. 16. [A Tradesman's Token of brass, much defaced, farthing size. *Obv.* Apparently a horse passant: *Leg.* AT THE WHITE HORSE. *Rev.* C ^B A IN BROAD STREET.] Found, with 1668 two other coins, on the east side, 15 feet deep, December 18th, 1840.

No. 17. [A small Token of Lead, having on one side a lion or cat sejant-guardant, and on the other T. M.] Found at the south-east corner, 15 feet deep, December 3d, 1840.

No. 18. [A Brass Medal, of the halfpenny size, struck to commemorate the decease of the Duke of York, January 5th, 1827.] Found at the south-west corner, with three other pieces, December 10th, 1840.

3. FOREIGN COINS AND JETTONS.

The pieces comprised under this division are less in numismatical value than even those belonging to the two former, as by far the greater part of the oldest and most numerous specimens consist of several varieties of those French or German Tokens, made either of brass or mixed metal, called JETTONS, or Counters, which are usually held by coin-collectors in very low estimation. These pieces have nevertheless an intrinsic interest of their own. They have been regarded as worthy of being made the subject of a separate tract by Snelling*; and the many various devices which they exhibit were frequently derived from circumstances requiring some historical illustration to develope their meaning. As the Jettons and Counters contained in the present collection are arranged and described with the same care as the coins comprised in the preceding divisions, a very few general particulars relating to them may possibly assist in rendering them somewhat more familiar and agreeable.

* *A View of the Origin, Nature, and Use of Jettons or Counters*, Lond. 1759, folio.

The metal Counters made in France, the Low Countries, and Germany, from the commencement of the fifteenth century, were at first designed for being placed upon, and moved over, a board marked with lines of different arithmetical value, for the summing-up of the items of accounts. This is expressed in the French name of *Jetton*, or something thrown, or cast, up and down the board, in the ancient method of "casting accounts;" and also in the Low-Dutch name of *Leg-Penning*, a penny or coin laid down for calculation; in the German *Rechen-Pfennig*, and in the English *Counter*. This original use of Jettons is to be found continually referred to in the legends and devices on these pieces; and one of the specimens in the present collection, struck about the middle of the sixteenth century, is impressed with the figure of a man standing with a counting-table before him and counters lying upon it*.

Whilst these pieces, however, were principally regarded as apparatus for calculation, they were also employed for the purpose of sport; since Stow, in 1598, notices the practice, during the feast of Christmas, "in the house of every noble man of honour or good worship," of "playing at cards for counters, nails, and points, more for pastime than for gain†." When the German jettons became used for other purposes beside the reckoning of accounts on boards, the devices stamped upon them began to have reference to other subjects; as the alphabet, which Snelling considers to have been intended for children, or passages of Scripture in Latin and German. There are specimens

* There are not in the ensuing series any specimens of jettons actually bearing the name of Reckoning-penny, several instances of which are engraven by Snelling. Two such pieces, however, one of them being a very fine and uncommon example, have been added to this collection by Mr. Arthur Taylor, solely for the purpose of illustrating these introductory notices.

Reckoning Pennies, with German and English Types.

Halfpenny size. Types as in No. 12: legends in Roman letters. *Obv.* RECHEN * PFENNIGE * *Rev.* KILIANVS * KOCH * NVRENBERG *.

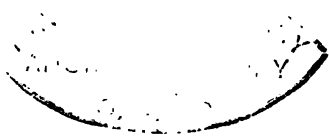
Farthing size. *Obv.* The heads of William III. and Queen Mary, placed side by side: *Leg.* in Roman letters, GVLIELMVS. ET. MARIA. REX. ET. REGINA. *Rev.* The royal arms of England, as borne by William III., on a plain shield, crowned and surrounded by the garter: *Leg.* RECH. PF. COVNTER. LAZ. GOTTL. LAVFR. This interesting specimen is of fine thin yellow metal, and is engraven with great minuteness.

† *A Survey of London*, Lond. 1598, small 4to, p. 72.

of both descriptions of jettons in the present collection. When the inscriptions on the jettons are expressed in the modern Gothic character, from the pieces having been probably struck before the commencement of the sixteenth century, they are not unfrequently almost incapable of a satisfactory explanation. In addition to the letters being often formed so very grotesquely as to render it exceedingly difficult to recognize them when regarded individually, they will occasionally be found set upon the coins inverted or reversed. The legend, in some instances, appears to consist of contracted syllables, or even of the initials only of the words intended; which is most probably the actual truth, rather than the conjecture contained in Snelling. "When they began to put letters," he observes, "they seemed rather for ornament than information, as sometimes a single letter was repeated till it filled the circumference; others have two or more, and those consonants; and on many, although there are many different letters, yet they appear to be without any meaning and quite unintelligible*." Several of the jettons about to be described are stamped with the most difficult legends of this nature.

The oldest and most usual impress on these pieces consisted of flowers, leaves, ornamented crosses, *etc.*, to which succeeded the head, device, or arms of the prince for whose country they were struck; which types are considered to have been first adopted in France in the fourteenth century. The gold coin of Charles IV., in A.D. 1322, has on the reverse a cross *fleurété-fourchée*, or *florence*; whence was derived the device usually to be seen on the reverses of jettons throughout the fifteenth century, of which several examples will be found in the ensuing list. Another type, frequently stamped on these pieces, which may also be regarded as having a French origin, is a crown. This figure is to be found on the gold royal of Louis VIII. or IX., early in the thirteenth century, and on many of the doubles and deniers of the two centuries following. On several of the latter coins also, crowns, and fleurs-de-lis and crowns, are dispersed together over the field; and hence probably originated, another

* A View of the Origin of Jettons, p. 9.



device very common as a reverse for jettons, consisting of three of each of those figures arranged in a circle. In the same manner, also, the Germans placed on their own national counters the arms borne by the Pfalzgraves of the Rhine, which were stamped upon the ancient Rhenish gold gulden, namely, the Imperial *Reichsapfel*, or mound ensigned with a cross, within a double trefoil-tressure or compartment. Of this type, also, various specimens may be seen on the following pieces. Some of the very common devices to be found on the old jettons appear to have been adopted in consequence of the German makers of counters being employed to strike them for other countries; as the figure of the lion of St. Mark on pieces intended for Venice, the royal arms of France, and some others of a later period engraved by Snelling.

In describing the ensuing specimens, the most natural order in which they can be disposed is according to the classes which they form by the national types appearing upon them; first enumerating those jettons which have the legend in Gothic letters, and afterwards those of which the inscriptions are in Roman letters. Very few, however, of the earlier counters can be accurately identified as to date. There are Twenty-two specimens of jettons and counters, and Eighteen pieces of foreign coins, contained in the ensuing list.

French Types.

No. 1. [Halfpenny size. *Obverse*, the modern arms of France on a shield: the legend in Gothic letters much defaced, but apparently ✱ AVE MARIA DEI MATER. *Rev.* A cross-fleurété within a quatrefoil, greatly defaced.] Found, with a coin of Vespasian, under the wall at the north-west angle, May 11th, 1841.

No. 2. [Farthing size. *Obv.* The modern arms of France on a crowned shield: *Leg.* CUS VNA. AUDDOYN. *Rev.* A rose-branch, with leaves and three flowers, the largest in the centre, radiated: *Leg.* ANA * AA * SSS * * O *.] Found, with a large jetton of the Venetian type, in the centre of the north side, 14 feet down, March 14th, 1841.

No. 3. [Halfpenny size. Three coins of thin yellow metal. *Obv.* A large ancient crown in the centre of the field. *Rev.* A cross-fleureté within a quatrefoil, in the external angles of which, and also in the quarters of the cross, is inserted the letter A. The legends of these pieces are all on the obverse only, in large and rude Gothic letters; and they consist apparently of either the initials or parts of words, forming the inscriptions following. 1. AIVAVEIVAI'I. VAIV...IVA...AV. 2. ABVAM DVALVAMA...LA.VLI. 3. VNAlAVS A MAVSALVNSAV.A.] Found, with a smaller and later jetton, and two coins entirely defaced, in the dry rubbish below the chalk wall under Sweeting's alley, 17 feet deep, November 28th, 1840.

No. 4. [Halfpenny size: broken. *Obv.* The modern arms of France on a shield, crowned and surrounded by the collar of the Order of St. Michael: *Legend* in Roman letters defaced, MEMENTO.....AVIG: ETERNIS. *Rev.* A square, containing the words VERBVM DOMINI MANET IN AETERNVM (Is. xl. 8.) in five lines.] Found at the south-west angle, by the wall, 16 feet deep, November 23d, 1840.

No. 5. [Farthing size, of thick metal, very much defaced. *Obv.* A youthful head of Louis XIII.: *Leg.* in Roman letters, HOC VINCI VICTO ADIVVAT. *Rev.* The arms of France and Navarre in two shields placed close together, crowned, and surrounded by the collars of the Orders of St. Michael and of the Holy Ghost: *Leg.* LVDOVICVS XIII. FR. ET NAVARR. REX.] Found, 16 feet deep on the south-east, November 28th, 1840.

German and Venetian Types.

No. 6. [Halfpenny size, of thick yellow metal, very much defaced. *Obv.* The *Reichsapfel*, or imperial mound, ensigned with a cross-patée, within a double tressure forming a trefoil compartment. *Rev.* The winged lion of St. Mark holding up a closed book. The legends on both sides in grotesque Gothic letters, quite illegible.] Found with the small jetton No. 2.

No. 7. [Halfpenny size, thin metal. Types as in No. 6 ; with different legends in a well-formed Gothic letter, but defaced and illegible.] Found in the centre area, 10 feet down, March 4th, 1841.

No. 8. [Halfpenny size, thick metal. Types as in No. 6 ; with different legends in a rude Gothic letter, quite illegible, and the coin defaced and partly broken.] Found with another coin completely encrusted and corroded, at the south-east angle, 10 feet deep, December 4th, 1840.

No. 9. [Farthing size. Two coins, one broken, of thin metal. *Obv.* The *Reichsapfel*, within a trefoil-compartment. *Rev.* Three crowns and three fleurs-de-lis disposed in a circle, enclosing a rose in the centre. The legends in Gothic letters, and differing from each other, but both defaced and illegible.] Found in the chalk sub-way, 11 feet deep, under the merchants' area, March 13th, 1841.

No. 10. [Farthing size. A mutilated counter of thin metal, bearing the same types as No. 9. The legend different, in Gothic letters, and illegible.] Found in the centre of the merchants' area, 8 feet deep, March 13th, 1841.

No. 11. [Halfpenny size, of thin metal. *Obv.* The figure of a *Rechen-meister*, or accountant, standing behind a counting-table with jettons upon it. *Rev.* The alphabet in Roman letters in a double square, ornamented on the exterior sides.] Found November 24th, 1840, at the south-west angle, on the surface.

No. 12. [Farthing size, of thin metal. *Obv.* The *Reichsapfel* in a trefoil-compartment: *Leg.* in Roman letters, SOLI DEO GLORIA. 1619. *Rev.* Crowns and fleurs-de-lis in a circle, with a rose in the centre: *Leg.* MATHEW LAVFER. IN. NVNBERG.] Found at the north-east angle, 12 feet deep, December 19th, 1840.

No. 13. [Farthing size, of thin metal, broken. Types as No. 12: legends in Roman letters. *Obv.* G(ott)ES GABEN. SOL. (man) LOB. *Rev.* HANNS KRAVWINCKEL IN NVR.] Found with a small Prussian coin, and a Tradesman's token, on the east side, 15 feet deep, December 18th, 1840.

No. 14. [Farthing size, thin metal, broken. Another variety of No. 13, having the same types and legends.] Found at the north-east angle, in the holes dug to contain the soil, about 17 feet deep in the gravel, September 3d, 1840.

No. 15. [Farthing size. Types as in No. 12: legends in Roman letters. *Obv.* WER. GOT. VER. TRAVT. HAT. *Rev.* W. LAVFER. IN. NVRMBE. . .] Found, with three other coins, completely corroded and defaced, at the south-east angle, 17 feet deep, November 30th, 1840.

No. 16. [Farthing size. Two coins. Types as No. 12: legends in Roman letters. *Obv.* GOTES REICH BLIBT EWICK. *Rev.* HANNS. KRAVWINCKEL. IN NVR.] Found at the north-east angle, 12 feet down, December 21st, 1840.

[Another Jetton, of the same size, types, and legend on the obverse, with the name of W. LAVFER. E. H. NVREMB. on the reverse. Found December 14th.]

No. 17. [Halfpenny size, of very thin metal, broken. Types as in No. 12: legends in Roman letters. *Obv.* DAS WORT GOTES B(leibt) EWICK. *Rev.* HANS K(ravv)INCKEL IN NVRNBERG.] Found with the jettons No. 3.

MISCELLANEOUS FOREIGN COINS.

No. 1. [FRENCH. A Double Denier of Black-money, of the reign of Philip VI. of France, mutilated: probably struck about 1358. *Obverse*, FR in large Gothic letters: *Leg.* ✱ PHILIPVS. *Rev.* A cross extending to the outer circle, patée at the extremities: *Leg.* ✱ MONETA (*deplex*).] Found in the centre of the merchants' area, 8 ft. deep, March 13th, 1841.

No. 2. [PRUSSIAN. A Two Silber-groschen piece, of Frederick II. of Prussia, of base metal. *Obv.* The Prussian eagle flying, crowned, and bearing the orb and sceptre: *Leg.* FRIDERIC: BORUSS: REX. Beneath the figure is * E * for the mint-mark of Königsberg. *Rev.* II GROSSUS REGNI PRUSS. 1757.] Found, with a small token and a jetton, on the eastern side, 15 feet deep, December 18th, 1840.

No. 3. [DANISH. Copper. An Eight-skilling piece of Christian VII. *Obv.* In the field the cypher C7, crowned. *Rev.* The arms of Denmark, Norway, and Sweden, on an oval shield crowned: *Leg.* 8 SKILLING DANSKE 1782. Beneath is a mint-mark of two mining-hammers in saltire, between H.I.A.B.] Found in the centre of the area, 10 feet deep, March 4th, 1841.

No. 4. [DUTCH. Copper. Fifteen Stivers. 1. *Obv.* The arms, supporters, and coronet of Utrecht, with the name beneath the shield. *Rev.* Within a quatrefoil, the inscription TRAJECT. 168...] Found 16 feet deep on the north-east side, December 28th, 1840.

[2. Several specimens with a similar type on the obverse; and on the reverse the cypher o Vc 1792, surmounted by the arms of Utrecht on a small shield.] Found on the surface of the rubbish at the north-west angle, December 9th, 1840; on the north side of the merchants' area, 12 feet deep, February 11th, 1841; at the north-west angle of the area, 8 and 10 feet deep, March 30th and April 1st, 1841; and several others on the north side, 16 feet down.

4. DEFACED COINS.

The defaced and corroded coins in this collection consist of Nineteen specimens, the most legible of which are described in the following notices.

No. 1. [Two Roman coins, apparently of the Second Brass of Claudius, one of which is broken ; but both are very much corroded, and the reverses are entirely destroyed : they are also without any titles as to the time and place of their discovery.]

No. 2. [A Roman coin, apparently of the Second Brass of Vespasian, but entirely corroded.] Found 18 feet down, on the south side under the wall, December 18th, 1840.

No. 3. [A Roman coin, apparently of the Second Brass of Vespasian, the reverse of which appears to have borne the type of "Mars Victor."] Found 16 feet deep at the south-east angle, December 1st, 1840.

[A broken Roman coin, apparently of the Second Brass of Vespasian, nearly destroyed with corrosion.] Found 18 feet down at the north-east corner, December 23d, 1840.

No. 4. [A Roman coin, apparently of the Second Brass of Domitian, the reverse of which is completely defaced.] Found at the south-east corner, 17 feet deep, December 3d, 1840.

No. 5. [A broken Roman coin, apparently of the Large Brass series, completely corroded and defaced.] Found 18 feet deep at the south-east angle, December, 1840.

No. 6. [Three small coins, apparently of the Third Brass of the later Roman series, completely defaced.]

1. Found, with a broken bottle, at the south-east angle, 16 feet deep, November 23d, 1840.

2. A broken coin, found in the old cesspool, 15 feet deep, February 19th, 1841.

3. Found 6 feet deep, at the east end of the merchants' area, February 20th.

No. 7. [Seven coins, partly encrusted with cement, and internally corroded.]

1, 2. Found with a jetton of the Venetian type, at the south-east angle, 10 feet deep, December 4th, 1840.

3. A thick broken brass coin; found in the cesspool at the south-west angle of the merchants' area, February 14th, 1841.

4. Four coins, without any title of time and place of discovery.

No. 8. [Two brass coins, apparently large Jettons; one being perfect in size, but worn entirely plain, the other much corroded and broken.] Found, with three other coins, beneath the merchants' area in the old chalk sub-way, March 12th, 1841.

MISCELLANEOUS REMAINS.

No. 1. [The fragment of a small metal Seal, probably of the seventeenth century, which appears to have been covered with a very thin silver plating. The device is nearly destroyed; but it may be seen to represent a ship with sailors in it, and some figures climbing the rigging, and also apparently fishing with a net, executed in relief.]

Found, near a pair of forceps (described on p. 38, No. 25), in the bottom of the large gravel-pit, 25 feet from the level of the street, April 24th, 1841. The soil lying immediately round the seal had the appearance of ashes, and contained a quantity of cuttings of brass.

No. II. [A small oval Seal of red cornelian, apparently quite modern, and coarsely engraved with a head in a shepherd's hat.]

Found April 27th, 1841, in the large cesspool under Lloyd's coffee-house, set in an iron ring, which was so much decayed as to fall in pieces.

No. III. [Part of a Rosary or Chaplet, consisting of six sets of very small cubical beads, of cocoa-wood, connected by a fine chain of silver wire formed into twisted links. The five larger beads are almost covered by plain silver caps; and the crucifix is made of a narrow piece of unwrought silver, crenellated on the edges, simply bent into the form of a Latin cross, patée at the extremities, an inch in length. The entire chain is 22 inches long; but, on account of the small number of beads of which it is now formed, it may be regarded rather as a Chaplet than as a complete Rosary*. Two of the present series, however, consist of no more than eight and nine beads, and the three concluding beads are also deficient; and it is therefore possible that the rest of the proper number may likewise have been lost, especially as a chaplet usually comprises five tens only. This article appears to have been manufactured in Italy, probably at Como, in the latter part of the seventeenth century, or the commencement of the eighteenth.]

Found 18 feet down, near the foot of the old tower, December 11th, 1840.

[* "*Le Rosaire* est un grand *Chapelet* de cent cinquante grains, qui font autant d'*Ave Maria*."—"Les *Chapelets* ordinaires n'ont que cinquante *Ave* et cinq *Pater*."—*Ceremonies et Coutumes Religieuses de tous les Peuples du Monde*, Amst. 1723, fol. vol. i. p. 177.]

No. IV. [Two fragments of fine Brass, probably ancient, which appear to have been ornamentally wrought, though they are now fused into shapeless masses, and covered with the green carbonate of copper.]

Found in the gravel-pit near the surface of the hole where the forceps and metal seal were discovered, surrounded by ashes, April 25th, 1841.

No. v. The Rowel of a Spur. Found February 4th, 1841.

[A brass or copper star of twelve points, six of which are much longer than the remainder. It is ornamented with mouldings on both sides, and may be regarded as the work of the sixteenth century.]

V. HORNS, BONES, AND TEETH: SHELLS, AND VEGETABLE REMAINS.

THE reliques included in the present division were found at the lowest part of the gravel-pit, under the west wall of the late Royal Exchange, beneath the Roman work, at the depth of 30 feet, about the 28th of April, 1841. The animal remains comprise fragments of the horns of deer and oxen, a few broken tusks of boars, several bones and teeth, apparently principally of sheep, and some marine shells. The vegetable specimens consist of pieces of fir-cones, remains of wood, chiefly of fir, for the most part artificially wrought, and part of a walnut-shell, which was taken up from the very lowest part of the excavations, and hence becomes an object of peculiar interest. These remains, however, are altogether too much decayed, and too few and inconsiderable, to admit of any particular illustrative description, or for any probable conjecture to be founded on them concerning the Roman building which stood on this site; and therefore only a short general account of the several groups of objects is here inserted.

HORNS.

In this division are contained five fragments of the Horns and Antlers of Deer, in remarkably fine preservation. The former consist of two specimens from the roots of the *beam*, or principal stem, of the horns chiefly of young stags, as may be conjectured from their roughness, their light colour, the acuteness of their points, and their slender proportions. These particular remains may be thus distinguished and described.

No. 1, A. The lower part of the horn of a young stag, exhibiting the *burr*, or root out of which the beam issues. The stem measures $7\frac{1}{2}$ inches in circumference, and the first antler is very

graceful and sharp, and extends 11 inches in length : it is rough almost to the very extremity, the usual indication of a young animal.

No. 1, B. The lower part of the horn of a stag, apparently older than the preceding; from which, however, the antlers have been all cut off. It measures 9 inches in circumference immediately above the burr.

No. 1, C. The lower antler of an old stag, measuring $12\frac{1}{2}$ inches in length, the surface of which is much less rough than the preceding. To the extent of about three inches from the point it is worn quite smooth, and is of a dull yellow-brown colour, like the hue of old ivory.

No. 1, D. One of the upper antlers of a young stag, measuring $7\frac{1}{2}$ inches to the point.

No. 1, E. Fragments of stag-horns, which have been apparently some of the upper antlers, or even palms, of old animals; of a dark yellow-brown colour, and worn entirely smooth. The longest specimen measures 8 inches.

Nos. 2, 3. Several perfect specimens of the fibrous bony cores of Ox-horns of different sizes, some of which have small portions of the skull attached to them. The longest specimen measures 1 foot, and the shortest 4 inches. In the division No. 3 is part of the bone of the nose of a boar, with the broken Tusk still remaining in it, and there are likewise some separate fragments of other tusks.

TEETH AND BONES.

No. 4. Ten specimens of molar animal Teeth, two of which yet remain in the dental grooves of a decayed jaw ; and there is also another fragment of a range of grooves entirely empty. In the same division there are several specimens of animal Bones, apparently those of sheep.

SHELLS.

No. 5, A. A specimen of the *Strombus* genus, the spire of which is broken off. The remainder measures $5\frac{1}{2}$ inches in length by 5 inches at the broadest part.

No. 5, B. A specimen of the *Placuna* genus, thick and foliaceous in substance, measuring $5\frac{1}{2}$ inches in depth from the hinge, by $4\frac{1}{2}$ inches at the broadest part.

No. 5, C. Five specimens of the *Tellina* genus.

VEGETABLE REMAINS.

No. 6. Fragments of two Fir-cones.

No. 6, A. The half of a small smooth Walnut-shell, found in the large gravel-pit hole, 35 feet deep, in the lowest excavation made upon the works, May 4th, 1841.

[There is great probability that this fruit was known or cultivated in Britain at a period much earlier than the sixteenth century, which is usually assigned to it: and the discovery of the present small relique, in a place which had previously remained closed for nearly 1470 years, carries back at least the appearance of this nut in England to about three centuries after its first recorded introduction into Europe, if not to a far more ancient date. The walnut is generally considered to have passed from Asia into Greece; and Pliny states that it was brought into Italy by L. Vitellius, from Syria, where he had been governor, a short time before the death of Tiberius, A.U.C. 790, A.D. 37*. About the same period also, a Roman knight, named Flaccus Pompeius, who had served with Vitellius, carried the fruit into Spain†; and the transmission of it into two different nations by soldiers naturally indicates that it might have been conveyed to Britain at some very early period in a similar manner. A remarkable walnut-tree formerly grew in the churchyard of Glastonbury Abbey‡, near

[* *Hist. Nat. lib. xv. c. xxi.*]

[† *Hist. Nat. lib. xv. c. xxiv.*]

[‡ *History and Antiquities of Glastonbury*, by T. Hearne, Oxf. 1722, 8vo, p. 112.]

St. Joseph's chapel, having been probably brought from Asia, together with the celebrated Glastonbury thorn ; both of which trees were known to be of considerable antiquity, though there is not any authentic account of their age extant. It may be added, further, that walnuts in England are familiarly mentioned, early in the fourteenth century, by Chaucer, and also by the author of *The Vision of Pierce Ploughman**.]

[* " I saw him carry a wind-mell
Under a walnote shale."

The House of Fame, book iii.

" As on a walnote withoute
Is a bitter barke,
And after that bitter barke,
Be the shelle awaye,
Is a kernel of confort
Kynde to restore."

Vision, Passus xi. v. 7082.]

No. 7. Several specimens of Wood, chiefly of fir, artificially wrought for different instruments, of which, however, they are only very imperfect fragments. In the same division are also five knots, apparently from fir planks, exhibiting their spirals and wings quite perfect, which have remained undestroyed in consequence of their substance being harder and closer in texture than the rest of the wood to which they belonged. The top of the largest specimen shows that it formed part of the edge of a board, where it ran obliquely into the timber, as two of the squared sides are yet remaining. There is also in this division a piece of black and decayed wood, containing a great number of the empty cases of insects.

VI. ARTICLES OF LATER PERIODS.

THE most important of the miscellaneous remains comprised in this division consist of a few specimens of glazed or vitrified Tiles, of the fourteenth or the following century ; of some vessels of coarsely glazed pottery of the fifteenth, sixteenth, and seventeenth centuries ; and of some large fragments of the ordinary thick foreign glass bottles, of the commencement of the eighteenth century. Of all these curious examples of ancient manufactures a descriptive account follows, distributed into groups appropriate to their probable antiquity and character. There are, however, several miscellaneous and inferior articles, of which only a very short notice is inserted ; since the earliest of them cannot be referred to any period beyond the close of the seventeenth century, and they belong chiefly to the eighteenth.

VITRIFIED TILES.

As an appendix to the First Class of his methodical arrangement of Pottery, M. Brongniart adds square tiles, bricks, *etc.* with vitrified glazing, which include also the thick glazed earthenware commonly called Norman tiles, ornamented with figures or armorial bearings. Of these tiles bearing devices, only a very few specimens were discovered on the site of the Royal Exchange, and they are described in the following notices.

No. 1. A Tile of red earth, measuring $5\frac{1}{4}$ inches by $5\frac{3}{8}$, and $1\frac{1}{8}$ inch in thickness, impressed with the figure of a lion rampant, looking to the sinister, enclosed within a lozenge formed by diagonal lines cutting off the rectangular corners. The whole surface has been covered by a thin, vitreous, yellow glaze, of which, however, there is but little remaining on any of these specimens ; and therefore the white clay with which the cavities

stamped out for the ornaments were originally filled is left plain, showing the peculiar process of the manufacture. The present tile, like another in this collection, was intended to be laid square, for the production of a diagonal or lozenge pattern, having small curved squares intervening between the sides of the diamonds. The style of drawing in these specimens may be regarded as belonging to the fifteenth century.

No. 2. A Tile of the same measurement, material, and colours, impressed with the figure of a lion passant, looking to the dexter. The angles are cut off by simple rounded lines, which, when the tiles were laid together, would form a series of curved lozenges embracing the rectangular corners.

No. 3. A Tile of the same material and colours, measuring $5\frac{1}{2}$ inches square and $1\frac{1}{2}$ inch in thickness. It is impressed with the figure of a large plain fleur-de-lis, enclosed in a lozenge, the angles of the tile being cut off by simple lines, the effect of which would be to leave an alternate row of vacant lozenges when the tiles were laid together.

No. 4. A plain Tile, broken, measuring on the perfect side $5\frac{3}{4}$ inches, and 1 inch in thickness. It is of red earth, and has been covered with a green glazing. The present and the next two specimens are instances of those vitrified tiles which were covered with a single colour and were without any figures, being occasionally employed to relieve the intricacy of the patterns produced by the decorated tiles.

No. 5. A plain Tile of red earth, measuring $4\frac{1}{2}$ inches square and 1 inch in thickness. The surface still retains the remains of a very thin dark glazing.

No. 6. A plain Tile of pale white clay, measuring 5 inches square and $\frac{3}{4}$ inch in thickness. It is covered with a thick dark colour, evidently much changed, which was originally either a deep brown or black.

No. 7. A plain triangular Tile of the kind made for the purpose of inserting at the angles or sides of ornamented tiles, for composing figures of large patterns in pavements. It measures 5 inches by $3\frac{1}{2}$ inches, and is an inch in thickness. The tile is made of red earth, and is covered with a very thin glazing, which has now become of a dark olive colour.

REMAINS OF ANCIENT FOREIGN EARTHEN-WARE.

The first specimens to be noticed under this title appear to belong to M. Brongniart's First Order of pottery, including that which is made of soft paste; and to the fourth Sub-order, which consists of ware having a thin glazing, the older and more common Faience. If this conjecture be accurate, the five articles immediately ensuing may be regarded as of the end of the fifteenth century, or the commencement of the following.

Nos. 1, 2. Fragments of two small earthen vessels intended for the preservation of pieces of money, which could not be taken out without destroying the depository, and hence such utensils are generally found broken. They are commonly known by the familiar and provincial names of "Thrift-boxes," or "Christmas-boxes*," and are still manufactured, though of a different form and a more substantial ware. When the present vessels were perfect they exhibited the appearance of short and broad bottles, about $3\frac{1}{2}$ inches in height, moulded and turned, with imitative stoppers apparently fixed in the mouths, and having a perpendicular slit, about $1\frac{1}{2}$ inch in length, for the reception of coin, on one shoulder. One side of this opening, partly glazed and stained with colour, is still visible in each specimen. These vessels are of thin friable clay, and are rudely covered over the upper part with a slight blackish-green glazing.

Vessels of this material, constructed for containing money, seem to have been of considerable antiquity. Count Caylus has engraven the figure of a flat oval box made of terra-cotta, of Greek

* *A Dictionary of Archaic and Provincial Words*, by James Orchard Halliwell, F.R.S., F.S.A., Lond. 1846, 8vo, p. 869. *Observations on Popular Antiquities*, by the Rev. John Brand, edit. by Sir H. Ellis, Lond. 1813, 4to, vol. i. p. 385, notes c. d.

workmanship, having on the top a head of Hercules, with a slit beneath it for receiving the coins; and he also mentions another, more elaborately ornamented, of Roman manufacture*. If such vessels were originally employed for receiving the *Strenæ*, or new year's gifts, of the Romans, they must be regarded as the prototypes of the modern Christmas-boxes; and, as the well-known ancient and fragile depositories for money, it is possible that there may be a remote figurative allusion to them in the expression of St. Paul, "We have this treasure in earthen vessels†." Aubrey very remarkably identifies the similarity between the ancient and modern forms of such utensils, in noticing a pot found in North Wiltshire containing some Roman *denarii*, which he states "resembled in appearance an apprentice's earthen Christmas-box‡."

The ensuing, and the two following articles, exhibit three specimens of large vessels for holding liquor, of Dutch or German manufacture. They are all similar to the preceding in respect of the clay, though of a much thicker ware; and they have been also roughly finished by a lathe, and are coarsely glazed in the same manner as the two fragments already described.

No. 3. A *Canette*, or tall vessel of a fusiform or skettle shape, swelling out at the middle of the body, and having a handle attached to a long narrow neck with a small mouth, altogether

* *Recueil d'Antiquités*, Paris, 1761, 4to, tom. iv. pl. liii. nos. iii. iv. p. 157.

† 2 Cor. iv. 7. *Thesaurum istum in vas fictilis*, is the Vulgate version; but the original text expressively indicates the extreme fragility of the utensil, by the words ἐν δοτακίνοις σκεύουσιν, testaceous or argillaceous vessels, of little worth and easily broken.

‡ *Miscellanies on several curious subjects*, Lond. 1714, 8vo, p. 26. In the Rev. J. Strype's account of Dr. Woodward's collection of Roman antiquities found in the rebuilding of London after the great Fire, "*Ollæ Nummaria clausæ*" are mentioned with other varieties of earthen vessels.—*Survey of London*, edit. 1720, fol. vol. ii. App., ch. v. Dr. Nehemiah Grew describes "a Roman money-pot" preserved at Gresham College, as being "of the colour of a crucible, and fashioned almost like a pint jug without a neck, closed at the top, and having a notch on one side like a Christmas-box."—*A Catalogue of the Rarities belonging to the Royal Society*, Lond. 1685, fol. p. 381. A plain circular vessel intended for the same purpose as the preceding, but apparently of a later date, though containing Roman coins, has been recently discovered with other ancient pottery in the vicinity of Lincoln.

greatly resembling an Egyptian water-bottle of the kind called *Dórak*. This vessel is nearly perfect, and stands about $17\frac{1}{2}$ inches in height, being $19\frac{1}{2}$ inches in circumference. It is made of pale clay, and retains some remains of a light-yellow glazing with which it has been partially and roughly covered.

No. 4. A vessel of the *Cruche* or pitcher form, shaped like the black leathern jack of the middle ages, standing $15\frac{1}{4}$ inches in height, and being 23 inches in circumference at the base, where it has been moulded by the fingers into plaits. It has a short neck and a narrow mouth with a spout; and is made of strong red-brownware, streaked over with a thick blackish-green glazing, excepting towards the base, which appears discoloured and burned, as if it had been placed upon a fire. This specimen is quite perfect.

No. 5. A Pitcher of pale thick clay, partially covered with a dusky green glazing, measuring $10\frac{1}{2}$ inches in height, and about 19 inches in circumference at the broadest part. It is of rather a graceful form, resembling an ewer or a beaker; having a tall broad neck ornamented with strong moulded bands, a stout handle, a swelling body, and a plaited foot. This specimen is broken down the front of the neck.

No. 6. A Jar or Bottle of thin pale clay, with a short neck and two handles set on close to the mouth. It is quite perfect, and stands $7\frac{1}{4}$ inches in height, and is 17 inches in circumference at the broadest part. All the upper part of the vessel has been covered with a thick pale-green glazing.

The next group of remains of earthen-ware is less complete and more modern than the preceding. It belongs to the Second Principal Order of M. Brongniart, which consists of pottery of hard clay, not capable of being streaked by a steel instrument, opaque, and made of siliceous lime, infusible in a porcelain furnace. This description of earthen-ware is assigned by the same authority to the sixteenth, seventeenth, and eighteenth centu-

ries ; but only the ensuing examples of Dutch glazed tiles can be referred to the earliest of those periods, and all the other specimens belong to the last. The fifth Sub-order of M. Brongniart includes fine Faience ware, one variety of which is that covered with a vitreous lead-glazing, ornamented with figures, and more or less coarsely stained with colours.

Nos. 7, 8. Two ornamented Dutch Tiles, probably both belonging to the sixteenth century, made of fine white clay, and measuring about $5\frac{1}{2}$ inches square, the latter example being half an inch in thickness, and the former somewhat more. They both contain only one fourth part of the figure which they were designed to form ; and the ornaments on each are executed in blue, pale yellow, orange, and green, with one instance of a deep purple, apparently produced by the darkest blue being laid on over the orange. No. 8 does not at present retain any trace of glazing, and a considerable part of the colour has been in consequence rubbed off the surface. The figure on it consists of one quarter of a quatrefoil, enclosing a pomegranate and flowers. No. 7 still retains some of the glazing, and the device on it exhibits one fourth part of an ornamental panel, having for the centre a large heraldical rose of three series of leaves.

Nos. 9, 10, 11, 12. In this division are to be noticed some specimens of old Delft ware, coarsely ornamented with blue lines and flowers, the most perfect of which are two large and broad medical pots for holding thick preparations. There are also two fragments of table-ware, one of which is part of a plate apparently belonging to a series, bearing the number 5, with the remains of a sentence upon it in English, within a compartment surmounted by a ducal coronet.

Nos. 13, 14, 15. The five specimens next ensuing belong to M. Brongniart's sixth Sub-order ; namely, Granulated Pottery or stone-ware. The most perfect of these are the remains of three small and stout *Canettes*, or bottles having handles, of Dutch or German manufacture, of the seventeenth century.

These vessels are about 9 inches in height and 17 inches in circumference, and are well covered with a clear brown glazing, one specimen appearing somewhat more granulated, and thicker in substance, than the others. They were evidently made in strong moulds, by which they are each ornamented with a grotesque bearded head on the neck, and a device enclosed in a decorated oval on the side; all the figures being rudely executed, though they are very sharply and deeply impressed. The types or devices exhibited on these vessels are an angel with elevated wings, a large front face, and a shield of arms surrounded by ornaments. It is probable that such canettes were brought in considerable quantities from the places where they were manufactured; and M. Brongniart states that many fragments were found in the bed of the Somme, near Pont-Rouge.

Nos. 16, 17. Two small vessels, probably of the seventeenth century, of fine brown stone-ware, turned and well covered with glazing, which, however, has been partially melted and transferred to some glass bottles lying near them. The first of these articles is a small drinking-jug, standing 6 inches in height, capable of holding about half a pint, mounted on a foot moulded into plaits, where it is partly broken.

The other specimen is a small vase, at present only $3\frac{1}{2}$ inches in height, all above the lower part of the neck being deficient. The foot is moulded into broad folds or plaits.

Nos. 18, 19, 20, 21. In addition to these larger examples of old earthen-ware, there are also in the present collection a few fragments of other kinds, belonging to the seventeenth and eighteenth centuries. The most perfect is a small chocolate-saucer of fine white glazed Holland ware, imitative of Chinese porcelain, ornamented with irregular patches of bright green, brown, and yellow, placed together, which was probably manufactured at the end of the seventeenth century. There are also several fragments of a small teapot of old red Japan ware; some pieces of the beautiful semi-vitrified composition called "Reaumur's Porcelain;" and a cup of Vauxhall gray ware, nearly covered with a thick bitu-

minous matter, which either ran over it, or was perhaps contained in the cup itself. In this division may be noticed some remains of clay tobacco-pipes, probably of the time of Charles II.

GLASS.

Nos. 22, 23, 24. Three specimens of the short, broad, and dark-green foreign wine-bottles, made at the commencement of the eighteenth century, two of which are capable of holding a pint; and the third, which is the only perfect example, about half that quantity. The glass of two of these vessels is very coarse and dark, possibly from having become de-vitrified by extreme heat; but the other specimen is much finer and clearer, although it is thicker in substance. The heat to which these bottles have been exposed is shown by two of them being spotted over with the liquified brown glazing of some vessels of stone-ware which lay near them, probably in the last conflagration of the Royal Exchange. There is also in this part of the collection a small piece of a large and thick Roman vase, completely coated over with dark melted glass, retaining its lustrous appearance on the surface, but de-vitrified and fibrous beneath.

The few reliques yet remaining to be noticed are of so ordinary and miscellaneous a nature as not to require any description. Some of them are coarse fire-irons, part of an iron candlestick, and the remains of other common and modern articles. There is, however, a tall slender candlestick, apparently of fine brass, but completely covered with rust, and broken into three pieces, which was probably manufactured in the close of the seventeenth century.

